

=&gt; file medline

FILE 'MEDLINE' ENTERED AT 17:47:28 ON 08 MAY 2003

FILE LAST UPDATED: 8 MAY 2003 (20030508/UP). FILE COVERS 1958 TO DATE.

=&gt; d que 1135

CT = controlled  
terminology

L102 14814 SEA FILE=MEDLINE ABB=ON PLU=ON DEXTRANS/CT  
 L103 2058 SEA FILE=MEDLINE ABB=ON PLU=ON MANNANS/CT  
 L104 751 SEA FILE=MEDLINE ABB=ON PLU=ON GUAR(2A) (GUM OR FLOUR) OR  
 GUARAN OR SLOCOSE  
 L114 36830 SEA FILE=MEDLINE ABB=ON PLU=ON HYDROLYSIS/CT  
 L125 123726 SEA FILE=MEDLINE ABB=ON PLU=ON MOLECULAR WEIGHT/CT  
 L127 5406 SEA FILE=MEDLINE ABB=ON PLU=ON DIETARY SUPPLEMENT/CT  
 L128 3645 SEA FILE=MEDLINE ABB=ON PLU=ON BEVERAGES/CT  
 L129 12962 SEA FILE=MEDLINE ABB=ON PLU=ON FOOD/CT  
 L130 21431 SEA FILE=MEDLINE ABB=ON PLU=ON ANIMAL FEED/CT  
 L133 67 SEA FILE=MEDLINE ABB=ON PLU=ON (L102 OR L103 OR L104) AND  
 (L127 OR L128 OR L129 OR L130)  
 L134 5 SEA FILE=MEDLINE ABB=ON PLU=ON L133 AND (L125 OR L114)  
 L135 3 SEA FILE=MEDLINE ABB=ON PLU=ON L134 AND (BOWEL OR FODDER OR  
 SALMONELLA)/TI 3 cites

=&gt; d que 1169

TU = therapeutic use  
 AE = adverse effects  
 PK = pharmacokinetics  
 PD = pharmacology  
 AB = dosage & admin.  
 DE = drug effects  
 DT = drug therapy  
 TH = therapy  
 NT = narrower  
 term

L102 14814 SEA FILE=MEDLINE ABB=ON PLU=ON DEXTRANS/CT  
 L103 2058 SEA FILE=MEDLINE ABB=ON PLU=ON MANNANS/CT  
 L104 751 SEA FILE=MEDLINE ABB=ON PLU=ON GUAR(2A) (GUM OR FLOUR) OR  
 GUARAN OR SLOCOSE  
 L108 8063 SEA FILE=MEDLINE ABB=ON PLU=ON (L102 OR L103 OR L104) (L) (TU  
 OR AD OR PK OR PD OR AE) /CT  
 L111 205371 SEA FILE=MEDLINE ABB=ON PLU=ON INTESTINES+NT/CT  
 L112 23513 SEA FILE=MEDLINE ABB=ON PLU=ON L111(L) (DE OR DT OR TH) /CT  
 L114 36830 SEA FILE=MEDLINE ABB=ON PLU=ON HYDROLYSIS/CT  
 L116 31732 SEA FILE=MEDLINE ABB=ON PLU=ON INTESTINAL ABSORPTION/CT  
 L125 123726 SEA FILE=MEDLINE ABB=ON PLU=ON MOLECULAR WEIGHT/CT  
 L159 789 SEA FILE=MEDLINE ABB=ON PLU=ON L108 AND (L114 OR L125)  
 L162 35 SEA FILE=MEDLINE ABB=ON PLU=ON L159 AND (?BACTER? OR  
 ?MICROB?)  
 L167 35 SEA FILE=MEDLINE ABB=ON PLU=ON L162 AND (REPERFUS? OR  
 ISCHEM? OR (L116 OR L112) OR (?BACTER? OR ?MICROB?))  
 L168 6 SEA FILE=MEDLINE ABB=ON PLU=ON L167 AND (?ADHER? OR ?ABSORB?  
 OR UPTAK? OR TRANSPORT? OR BLOCK?)  
 L169 2 SEA FILE=MEDLINE ABB=ON PLU=ON L168 AND (SANGUIS OR PSEUDOMON  
 AS)/TI 2 cites

=&gt; d que 1171

L102 14814 SEA FILE=MEDLINE ABB=ON PLU=ON DEXTRANS/CT  
 L103 2058 SEA FILE=MEDLINE ABB=ON PLU=ON MANNANS/CT  
 L104 751 SEA FILE=MEDLINE ABB=ON PLU=ON GUAR(2A) (GUM OR FLOUR) OR  
 GUARAN OR SLOCOSE  
 L108 8063 SEA FILE=MEDLINE ABB=ON PLU=ON (L102 OR L103 OR L104) (L) (TU  
 OR AD OR PK OR PD OR AE) /CT  
 L111 205371 SEA FILE=MEDLINE ABB=ON PLU=ON INTESTINES+NT/CT  
 L112 23513 SEA FILE=MEDLINE ABB=ON PLU=ON L111(L) (DE OR DT OR TH) /CT  
 L114 36830 SEA FILE=MEDLINE ABB=ON PLU=ON HYDROLYSIS/CT  
 L116 31732 SEA FILE=MEDLINE ABB=ON PLU=ON INTESTINAL ABSORPTION/CT

L125 123726 SEA FILE=MEDLINE ABB=ON PLU=ON MOLECULAR WEIGHT/CT  
 L159 789 SEA FILE=MEDLINE ABB=ON PLU=ON L108 AND (L114 OR L125)  
 L162 35 SEA FILE=MEDLINE ABB=ON PLU=ON L159 AND (?BACTER? OR  
 ?MICROB?)  
 L167 35 SEA FILE=MEDLINE ABB=ON PLU=ON L162 AND (REPERFUS? OR  
 ISCHEM? OR (L116 OR L112) OR (?BACTER? OR ?MICROB?))  
 L168 6 SEA FILE=MEDLINE ABB=ON PLU=ON L167 AND (?ADHER? OR ?ABSORB?  
 OR UPTAK? OR TRANSPORT? OR BLOCK?)  
 L170 29 SEA FILE=MEDLINE ABB=ON PLU=ON L167 NOT L168  
 L171 3 SEA FILE=MEDLINE ABB=ON PLU=ON L170 AND (WOMEN OR HENS OR 3 cites  
 HEMOLYTICA)/TI

=> s l135 or l169 or l171

L220 7 L135 OR L169 OR L171 7 cites total med line

=> file caba

FILE 'CABA' ENTERED AT 17:47:31 ON 08 MAY 2003  
 COPYRIGHT (C) 2003 CAB INTERNATIONAL (CABI)

FILE COVERS 1973 TO 2 May 2003 (20030502/ED)

This file contains CAS Registry Numbers for easy and accurate  
 substance identification.

=> d que l200

L197 201 SEA FILE=CABA ABB=ON PLU=ON (DEXTRAN OR GLUCOMANNAN OR  
 GALACTOMANNAN OR GUAR(2A)GUM)(10A)(HYDROL? OR DIGEST?)  
 L198 40 SEA FILE=CABA ABB=ON PLU=ON L197 AND (GUT OR INTESTIN? OR  
 COLON OR ILEUM)  
 L200 1 SEA FILE=CABA ABB=ON PLU=ON L198 AND MEDICAL/TI 1 cite for CABA

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 17:47:32 ON 08 MAY 2003  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907 - 8 May 2003 VOL 138 ISS 19  
 FILE LAST UPDATED: 7 May 2003 (20030507/ED)

This file contains CAS Registry Numbers for easy and accurate  
 substance identification.

=> d que l45

L11 1 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-54-0 dextran  
 L12 945 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-54-0/CRN mixtures w/ dextran  
 L18 13111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11  
 L19 5185 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L20 17452 SEA FILE=HCAPLUS ABB=ON PLU=ON (L18 OR L19)  
 L21 2387 SEA FILE=HCAPLUS ABB=ON PLU=ON L20(L)(FFD OR THU)/RL  
 L36 4087 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINAL CONTENT+PFT/CT  
 L37 30543 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIVE TRACT+PFT/CT  
 FED = feed  
 THU = therapy  
 PFT = terms that

L38 9951 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIBILITY+PFT/CT  
 L39 125291 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINE+PFT/CT  
 L40 164 SEA FILE=HCAPLUS ABB=ON PLU=ON (L36 OR L37 OR L38 OR L39)  
 AND L21  
 L42 48501 SEA FILE=HCAPLUS ABB=ON PLU=ON ADHESION, PHYSICAL+PFT/CT  
 L44 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L40  
 L45 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 NOT FATTY ACID/TI 7 cites

=&gt; d que 153

L11 1 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-54-0 *glucomannan*  
 L12 945 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-54-0/CRN *mixtures w/*  
 L18 13111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11  
 L19 5185 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L20 17452 SEA FILE=HCAPLUS ABB=ON PLU=ON (L18 OR L19)  
 L36 4087 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINAL CONTENT+PFT/CT  
 L37 30543 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIVE TRACT+PFT/CT  
 L38 9951 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIBILITY+PFT/CT  
 L39 125291 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINE+PFT/CT  
 L46 11801 SEA FILE=HCAPLUS ABB=ON PLU=ON BEVERAGES+PFT/CT  
 L47 53723 SEA FILE=HCAPLUS ABB=ON PLU=ON FOOD+PFT/CT  
 L48 1862 SEA FILE=HCAPLUS ABB=ON PLU=ON FEED ADDITIVES+PFT/CT  
 L49 55656 SEA FILE=HCAPLUS ABB=ON PLU=ON NUTRITION, ANIMAL+PFT/CT  
 L51 320 SEA FILE=HCAPLUS ABB=ON PLU=ON L20(L)HYDROL?  
 L52 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L51 AND (L46 OR L47 OR L48 OR L49) *none of these have hydrolyzed sugar*  
 L53 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L52 AND (L36 OR L37 OR L38 OR L39) *nocites*

=&gt; d que 156

L11 1 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-54-0 } *glucmannan*  
 L12 945 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-54-0/CRN }  
 L18 13111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11  
 L19 5185 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L20 17452 SEA FILE=HCAPLUS ABB=ON PLU=ON (L18 OR L19)  
 L36 4087 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINAL CONTENT+PFT/CT  
 L37 30543 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIVE TRACT+PFT/CT  
 L38 9951 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIBILITY+PFT/CT  
 L39 125291 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINE+PFT/CT  
 L42 48501 SEA FILE=HCAPLUS ABB=ON PLU=ON ADHESION, PHYSICAL+PFT/CT  
 L43 205179 SEA FILE=HCAPLUS ABB=ON PLU=ON BIOLOGICAL TRANSPORT+PFT/CT  
 L46 11801 SEA FILE=HCAPLUS ABB=ON PLU=ON BEVERAGES+PFT/CT  
 L47 53723 SEA FILE=HCAPLUS ABB=ON PLU=ON FOOD+PFT/CT  
 L48 1862 SEA FILE=HCAPLUS ABB=ON PLU=ON FEED ADDITIVES+PFT/CT  
 L49 55656 SEA FILE=HCAPLUS ABB=ON PLU=ON NUTRITION, ANIMAL+PFT/CT  
 L54 140 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND (L46 OR L47 OR L48 OR L49)  
 L55 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L54 AND (L36 OR L37 OR L38 OR L39)  
 L56 1 SEA FILE=HCAPLUS ABB=ON PLU=ON (L42 OR L43) AND L55 1 cite

=&gt; d que 159

L13 28 SEA FILE=REGISTRY ABB=ON PLU=ON 11078-31-2/CRN } *galactomannan*  
 L26 1 SEA FILE=REGISTRY ABB=ON PLU=ON 11078-31-2 }  
 L28 1068 SEA FILE=HCAPLUS ABB=ON PLU=ON L26

L29 40 SEA FILE=HCAPLUS ABB=ON PLU=ON L13  
 L30 1099 SEA FILE=HCAPLUS ABB=ON PLU=ON (L28 OR L29)  
 L58 2790 SEA FILE=HCAPLUS ABB=ON PLU=ON TIGHT JUNCTION  
 L59 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND L58 2 cites

=> d que 163

L16 1 SEA FILE=REGISTRY ABB=ON PLU=ON "GUAR GUM"/CN  
 L17 246 SEA FILE=REGISTRY ABB=ON PLU=ON 9000-30-0/CRN mixtures w/ guar gum  
 L22 5413 SEA FILE=HCAPLUS ABB=ON PLU=ON L16  
 L23 1411 SEA FILE=HCAPLUS ABB=ON PLU=ON L17  
 L24 6301 SEA FILE=HCAPLUS ABB=ON PLU=ON (L22 OR L23)  
 L36 4087 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINAL CONTENT+PFT/CT  
 L37 30543 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIVE TRACT+PFT/CT  
 L38 9951 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIBILITY+PFT/CT  
 L39 125291 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINE+PFT/CT  
 L46 11801 SEA FILE=HCAPLUS ABB=ON PLU=ON BEVERAGES+PFT/CT  
 L47 53723 SEA FILE=HCAPLUS ABB=ON PLU=ON FOOD+PFT/CT  
 L48 1862 SEA FILE=HCAPLUS ABB=ON PLU=ON FEED ADDITIVES+PFT/CT  
 L49 55656 SEA FILE=HCAPLUS ABB=ON PLU=ON NUTRITION, ANIMAL+PFT/CT  
 L60 181 SEA FILE=HCAPLUS ABB=ON PLU=ON L24(L)HYDROL?  
 L61 23 SEA FILE=HCAPLUS ABB=ON PLU=ON L60 AND (L36 OR L37 OR L38 OR L39)  
 L62 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L61 AND (L46 OR L47 OR L48 OR L49)  
 L63 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L62 NOT PROTEIN/TI 3 cites

=> d que 166

L13 28 SEA FILE=REGISTRY ABB=ON PLU=ON 11078-31-2/CRN  
 L26 1 SEA FILE=REGISTRY ABB=ON PLU=ON 11078-31-2  
 L28 1068 SEA FILE=HCAPLUS ABB=ON PLU=ON L26  
 L29 40 SEA FILE=HCAPLUS ABB=ON PLU=ON L13  
 L30 1099 SEA FILE=HCAPLUS ABB=ON PLU=ON (L28 OR L29)  
 L36 4087 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINAL CONTENT+PFT/CT  
 L37 30543 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIVE TRACT+PFT/CT  
 L38 9951 SEA FILE=HCAPLUS ABB=ON PLU=ON DIGESTIBILITY+PFT/CT  
 L39 125291 SEA FILE=HCAPLUS ABB=ON PLU=ON INTESTINE+PFT/CT  
 L65 55 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L)HYDROL?  
 L66 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 AND (L36 OR L37 OR L38 OR L39) no cites  
 L36-39 do not touch hydrolyzed sugars

=> d que 168

L13 28 SEA FILE=REGISTRY ABB=ON PLU=ON 11078-31-2/CRN  
 L26 1 SEA FILE=REGISTRY ABB=ON PLU=ON 11078-31-2  
 L28 1068 SEA FILE=HCAPLUS ABB=ON PLU=ON L26  
 L29 40 SEA FILE=HCAPLUS ABB=ON PLU=ON L13  
 L30 1099 SEA FILE=HCAPLUS ABB=ON PLU=ON (L28 OR L29)  
 L46 11801 SEA FILE=HCAPLUS ABB=ON PLU=ON BEVERAGES+PFT/CT  
 L47 53723 SEA FILE=HCAPLUS ABB=ON PLU=ON FOOD+PFT/CT  
 L48 1862 SEA FILE=HCAPLUS ABB=ON PLU=ON FEED ADDITIVES+PFT/CT  
 L49 55656 SEA FILE=HCAPLUS ABB=ON PLU=ON NUTRITION, ANIMAL+PFT/CT  
 L65 55 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 (L)HYDROL?  
 L67 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L65 AND (L46 OR L47 OR L48 OR L49)  
 L68 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L67 NOT ENZYMIC/TI 2 cites

=&gt; d que 173

L15	42	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	11078-30-1/CRN	
L27	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	11078-30-1	
L32	1477	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L27	
L33	57	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L15	
L34	1519	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L32 OR L33)	
L36	4087	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	INTESTINAL CONTENT+PFT/CT	
L37	30543	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	DIGESTIVE TRACT+PFT/CT	
L38	9951	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	DIGESTIBILITY+PFT/CT	
L39	125291	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	INTESTINE+PFT/CT	
L72	47	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L34(L)HYDROL?	
L73	0	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L72 AND (L36 OR L37 OR L38 OR L39)	no cites

=&gt; d que 174

L15	42	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	11078-30-1/CRN	
L27	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	11078-30-1	
L32	1477	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L27	
L33	57	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L15	
L34	1519	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L32 OR L33)	
L46	11801	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BEVERAGES+PFT/CT	
L47	53723	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FOOD+PFT/CT	
L48	1862	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FEED ADDITIVES+PFT/CT	
L49	55656	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	NUTRITION, ANIMAL+PFT/CT	
L72	47	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L34(L)HYDROL?	
L74	4	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L72 AND (L46 OR L47 OR L48 OR L49)	4 cites

=&gt; d que 178

L15	42	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	11078-30-1/CRN	
L27	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	11078-30-1	
L32	1477	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L27	
L33	57	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L15	
L34	1519	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L32 OR L33)	
L36	4087	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	INTESTINAL CONTENT+PFT/CT	
L37	30543	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	DIGESTIVE TRACT+PFT/CT	
L38	9951	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	DIGESTIBILITY+PFT/CT	
L39	125291	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	INTESTINE+PFT/CT	
L46	11801	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BEVERAGES+PFT/CT	
L47	53723	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FOOD+PFT/CT	
L48	1862	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FEED ADDITIVES+PFT/CT	
L49	55656	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	NUTRITION, ANIMAL+PFT/CT	
L72	47	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L34(L)HYDROL?	
L74	4	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L72 AND (L46 OR L47 OR L48 OR L49)	
L75	54	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L34 AND (L36 OR L37 OR L38 OR L39)	
L76	8	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L75 AND (L46 OR L47 OR L48 OR L49)	
L77	8	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L76 NOT L74	
L78	2	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L77 AND HYDROL?	2 cites

=&gt; d que 186

L36	4087	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	INTESTINAL CONTENT+PFT/CT	
L37	30543	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	DIGESTIVE TRACT+PFT/CT	
L38	9951	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	DIGESTIBILITY+PFT/CT	
L39	125291	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	INTESTINE+PFT/CT	
L46	11801	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	BEVERAGES+PFT/CT	
L47	53723	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FOOD+PFT/CT	
L48	1862	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FEED ADDITIVES+PFT/CT	
L49	55656	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	NUTRITION, ANIMAL+PFT/CT	
L79	44278	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	POLYSACCHARIDES+PFT/CT	} more general
L80	109899	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	CARBOHYDRATES+PFT/CT	
L81	27037	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	OLIGOSACCHARIDES+PFT/CT	
L82	2599	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L79 OR L80 OR L81)(L)HYDROL?	
L83	107	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L82 AND (L36 OR L37 OR L38 OR L39)	
L84	14	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L83 AND (L46 OR L47 OR L48 OR L49)	
L86	10	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L84 NOT PROTEIN/TI	10 cites

=&gt; s 153 or 156 or 159 or 163 or 166 or 168 or 173 or 174 or 178 or 186

L221 22 L53 OR L56 OR L59 OR L63 OR L66 OR L68 OR L73 OR L74 OR L78 OR L86  
 22 cites total for HCAPLUS

=&gt; file wpix

FILE 'WPIX' ENTERED AT 17:47:41 ON 08 MAY 2003  
 COPYRIGHT (C) 2003 THOMSON-DERWENT

FILE LAST UPDATED: 5 MAY 2003 <20030505/UP>  
 MOST RECENT DERWENT UPDATE: 200329 <200329/DW>  
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

=&gt; d que 1174

L172	288	SEA	FILE=WPIX	ABB=ON	PLU=ON	(?DEXTRAN OR ?MANNAN OR GUAR(2A)GUM)(10A)(HYDROL? OR DIGEST?)	
L173	18	SEA	FILE=WPIX	ABB=ON	PLU=ON	L172 AND (GUT OR INTESTIN? OR COLON OR ILEUM)	
L174	7	SEA	FILE=WPIX	ABB=ON	PLU=ON	L173 AND (SALMONELLA OR RIGID OR GALACTOSE-CONTAINING OR PROTECTIVE OR ALLERGY OR LIVER OR CHEWING)/TI	7 cites for Derwent

=> dup rem 1220 1200 1221 1174 removing duplicates  
 FILE 'MEDLINE' ENTERED AT 17:49:09 ON 08 MAY 2003

FILE 'CABA' ENTERED AT 17:49:09 ON 08 MAY 2003  
 COPYRIGHT (C) 2003 CAB INTERNATIONAL (CABI)

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FILE 'WPIX' ENTERED AT 17:49:09 ON 08 MAY 2003  
 COPYRIGHT (C) 2003 THOMSON DERWENT

PROCESSING COMPLETED FOR L220  
 PROCESSING COMPLETED FOR L200  
 PROCESSING COMPLETED FOR L221  
 PROCESSING COMPLETED FOR L174

(L222 36 DUP REM L220 L200 L221 L174 (1 DUPLICATE REMOVED) 36 cites total.  
 ANSWERS '1-7' FROM FILE MEDLINE  
 ANSWER '8' FROM FILE CABA  
 ANSWERS '9-30' FROM FILE HCAPLUS  
 ANSWERS '31-36' FROM FILE WPIX

=> d ibib abs ind 1-7

L222 ANSWER 1 OF 36 MEDLINE  
 ACCESSION NUMBER: 2002428199 MEDLINE  
 DOCUMENT NUMBER: 22171701 PubMed ID: 12184518  
 TITLE: High-fiber diet supplementation in patients with irritable  
 bowel syndrome (IBS): a multicenter, randomized,  
 open trial comparison between wheat bran diet and partially  
 hydrolyzed guar gum (PHGG).  
 AUTHOR: Parisi G C; Zilli M; Miani M P; Carrara M; Bottona E;  
 Verdianelli G; Battaglia G; Desideri S; Faedo A; Marzolino  
 C; Tonon A; Ermani M; Leandro G  
 CORPORATE SOURCE: Servizio di Gastroenterologia, Casa di Cura Abano Terme USL  
 16, Padova, Italy.  
 SOURCE: DIGESTIVE DISEASES AND SCIENCES, (2002 Aug) 47 (8)  
 1697-704.  
 Journal code: 7902782. ISSN: 0163-2116.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 (MULTICENTER STUDY)  
 (RANDOMIZED CONTROLLED TRIAL)  
 LANGUAGE: English  
 FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
 ENTRY MONTH: 200208  
 ENTRY DATE: Entered STN: 20020820  
 Last Updated on STN: 20020831  
 Entered Medline: 20020830

AB High-fiber diet supplementation is commonly used in IBS, although it poses  
 several management problems. Partially hydrolyzed guar  
 gum (PHGG) has shown beneficial effects in animal and human  
 studies, but its potential role in IBS symptom relief has not been  
 evaluated yet. We investigated PHGG in IBS patients and compared it to a  
 wheat bran diet. Abdominal pain, bowel habits, and subjective overall  
 rating were longitudinally evaluated in 188 adult IBS patients (139 women  
 and 49 men) for 12 weeks. Patients were classified as having  
 diarrhea-predominant, constipation-predominant, or changeable bowel habits  
 and were randomly assigned to groups receiving fiber (30 g/day of wheat  
 bran) or PHGG (5 g/day). After four weeks, patients were allowed to  
 switch group, depending on their subjective evaluation of their symptoms.  
 Significantly more patients switched from fiber to PHGG (49.9%) than from  
 PHGG to fiber (10.9%) at four weeks. Per protocol analysis showed that  
 both fiber and PHGG were effective in improving pain and bowel habits, but  
 no difference was found between the two groups. Conversely,  
 intention-to-treat analysis showed a significantly greater success in the  
 PHGG group (60%) than in the fiber group (40%). Moreover, significantly  
 more patients in the PHGG group reported a greater subjective improvement  
 than those in the Fiber group. In conclusion, improvements in core IBS  
 symptoms (abdominal pain and bowel habits) were observed with both bran  
 and PHGG, but the latter was better tolerated and preferred by patients,

revealing a higher probability of success than bran and a lower probability of patients abandoning the prescribed regimen, suggesting that it can increase the benefits deriving from fiber intake in IBS, making it a valid option to consider for high-fiber diet supplementation.

CT Check Tags: Comparative Study; Female; Human; Male  
Adult

\*Colonic Diseases, Functional: DH, diet therapy  
Colonic Diseases, Functional: PP, physiopathology  
\*Dietary Fiber: AD, administration & dosage

\*Dietary Supplements

\*Galactans: AD, administration & dosage  
Hydrolysis

\*Mannans: AD, administration & dosage

RN 9000-30-0 (guar gum)

CN 0 (Galactans); 0 (Mannans)

L222 ANSWER 2 OF 36 MEDLINE

ACCESSION NUMBER: 2000398538 MEDLINE

DOCUMENT NUMBER: 20283099 PubMed ID: 10824957

TITLE: Preventive effect of partially hydrolyzed guar gum on infection of *Salmonella* enteritidis in young and laying hens.

AUTHOR: Ishihara N; Chu D C; Akachi S; Juneja L R

CORPORATE SOURCE: Nutritional Foods Division, Taiyo Kagaku Co., Ltd., Yokkaichi, Mie, Japan.. nishihara@taiyokagaku.co.jp

SOURCE: POULTRY SCIENCE, (2000 May) 79 (5) 689-97.  
Journal code: 0401150. ISSN: 0032-5791.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200008

ENTRY DATE: Entered STN: 20000824

Last Updated on STN: 20000824

Entered Medline: 20000811

AB The preventive effect of partially hydrolyzed guar gum (PHGG) on the colonization of *Salmonella* enteritidis (SE) in young and laying hens was investigated. The effects of feed supplemented with 0.025, 0.05, and 0.1% PHGG was examined on young hens orally infected with SE. The incidence of SE in organs was decreased, the excretion of SE into feces was increased, and the agglutinating antibody titer to SE in serum was decreased by the administration of PHGG to young hens. In particular, feed supplemented with 0.025% PHGG was the most effective. It was also shown that feed supplemented with 0.025% PHGG increased the number of *Bifidobacterium* spp. and *Lactobacillus* spp., the most numerous intestinal bacteria in the cecum of young hen. The effect of the excretion of SE via feces was also observed in an experiment using laying hens. The incidence of SE on the surface of the eggshell and in egg white and egg yolk was also decreased when the feed of laying hens was supplemented with 0.025% PHGG. These results show that the administration of feed supplemented with PHGG can prevent the colonization of SE in young and laying hens, which, in turn, could be related to improvement in the balance of intestinal microflora.

CT Check Tags: Animal; Female

Agglutination Tests: VE, veterinary

Animal Feed

Antibodies, Bacterial: BL, blood

*Bifidobacterium*: IP, isolation & purification

\*Chickens

Colony Count, Microbial



Egg Shell: MI, microbiology  
 Egg White: MI, microbiology  
 Egg Yolk: MI, microbiology  
 \*Eggs: MI, microbiology  
 Feces: MI, microbiology  
 \*Galactans: AD, administration & dosage  
 Galactans: CH, chemistry  
 Hydrolysis  
 Intestines: MI, microbiology  
 Lactobacillus: IP, isolation & purification  
 \*Mannans: AD, administration & dosage  
 Mannans: CH, chemistry  
 O Antigens: CH, chemistry  
 Oviposition  
 Poultry Diseases: MI, microbiology  
 \*Poultry Diseases: PC, prevention & control  
 Salmonella Infections, Animal: BL, blood  
 Salmonella Infections, Animal: MI, microbiology  
 \*Salmonella Infections, Animal: PC, prevention & control  
 \*Salmonella enteritidis: GD, growth & development  
 Salmonella enteritidis: IP, isolation & purification  
 RN 9000-30-0 (guar gum)  
 CN 0 (Antibodies, Bacterial); 0 (Galactans); 0 (Mannans); 0 (Antigens)

L222 ANSWER 3 OF 36 MEDLINE  
 ACCESSION NUMBER: 2000190519 MEDLINE  
 DOCUMENT NUMBER: 20190519 PubMed ID: 10726320  
 TITLE: [Characteristics of biologically active mannan substances, isolated from fodder yeast].  
 Kharakteristika biologicheskii aktivnykh preparatov mannana, vydelennykh iz kormovykh drozhzhei.  
 AUTHOR: Kovalenko A G; Telegeeva T A  
 CORPORATE SOURCE: D. K. Zabolotny Institute of Microbiology and Virology NAS of Ukraine, Kyiv.  
 SOURCE: UKRAINSKII BIOKHMICHESKII ZHURNAL, (1999 Sep-Oct) 71 (5) 104-9.  
 Journal code: 7804246. ISSN: 0201-8470.  
 PUB. COUNTRY: Ukraine  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: Russian  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200005  
 ENTRY DATE: Entered STN: 20000613  
 Last Updated on STN: 20000613  
 Entered Medline: 20000531

AB The component composition and antiviral properties of the mannan-containing preparations were studied. These preparations were extracted from some laboratory and commercial specimens of the fodder yeast cultivated on different substrates. It was shown, that the main component of pure preparation was the mannan which had molecular mass near 13 kDa. The monosaccharide composition of mannan component was varied depending on the source, degree of purification, methods of purification of the preparations. However, the crude and pure mannan preparations activity relatively to VTV was approximately equal.

CT \*Animal Feed: MI, microbiology  
 \*Candida: CH, chemistry  
 Chromatography, Gas  
 Chromatography, Gel  
 English Abstract

\*Mannans: CH, chemistry  
 Mannans: IP, isolation & purification  
 Molecular Weight

CN 0 (Mannans)

L222 ANSWER 4 OF 36 MEDLINE  
 ACCESSION NUMBER: 97125293 MEDLINE  
 DOCUMENT NUMBER: 97125293 PubMed ID: 8970372  
 TITLE: Inhibition by dextran of *Pseudomonas aeruginosa*  
 adherence to epithelial cells.  
 AUTHOR: Barghouthi S; Guerdoud L M; Speert D P  
 CORPORATE SOURCE: Department of Paediatrics, University of British Columbia,  
 Vancouver, Canada.  
 SOURCE: AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE,  
 (1996 Dec) 154 (6 Pt 1) 1788-93.  
 Journal code: 9421642. ISSN: 1073-449X.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
 ENTRY MONTH: 199701  
 ENTRY DATE: Entered STN: 19970128  
 Last Updated on STN: 19970128  
 Entered Medline: 19970116

AB **Adherence** of *Pseudomonas aeruginosa* to cells of the respiratory tract of patients with cystic fibrosis (CF) appears to be a necessary precondition for colonization and infection. To date no effective anti-adhesive strategy has been devised for preventing *P. aeruginosa* infection in these vulnerable hosts. The purpose of these studies was to evaluate the potential for preventing adhesion of *P. aeruginosa* to epithelial cells with dextran. Dextran (3,000-70,000 MW) inhibited adhesion of *P. aeruginosa* to buccal and A549 pulmonary epithelial cells; the 3,000 MW compound, at 10 mM was most inhibitory. Adhesion was inhibited optimally at pH 7.4 and was independent of charge; dextran and dextran sulfate were equally inhibitory. Dextran was most inhibitory if added to the epithelial cells before the *P. aeruginosa*; adhesion was reversed only minimally by adding dextran after the **bacteria** were bound. The inhibitory effect appeared to be nonspecific because other neutral polysaccharides (glycogen and mannan) were also inhibitory, dextran **blocked** attachment of other respiratory tract pathogens (*Staphylococcus aureus*, Group A streptococcus, and *Haemophilus influenzae*), and because dextran did not bind specifically to **bacteria** or to epithelial cells. Dextran is an inexpensive and nontoxic agent and may be useful in patients with CF to prevent colonization and infection with *P. aeruginosa*.

CT Check Tags: Human; Support, Non-U.S. Gov't

\***Bacterial Adhesion: DE, drug effects**

Cells, Cultured

Cystic Fibrosis: MI, microbiology

\***Dextrans: PD, pharmacology**

Epithelium: MI, microbiology

Glycogen: PD, pharmacology

Hydrogen-Ion Concentration

\***Lung: MI, microbiology**

Mannans: PD, pharmacology

Molecular Weight

Polysaccharides: PD, pharmacology

*Pseudomonas aeruginosa*: DE, drug effects

*Pseudomonas aeruginosa*: GD, growth & developmen

\**Pseudomonas aeruginosa*: PH, physiology

*I know that  
 this is respiratory  
 but maybe a 1037*

RN 9004-54-0 (Dextrans); 9005-79-2 (Glycogen)  
 CN 0 (Mannans); 0 (Polysaccharides)

L222 ANSWER 5 OF 36 MEDLINE

ACCESSION NUMBER: 95054539 MEDLINE  
 DOCUMENT NUMBER: 95054539 PubMed ID: 7965214  
 TITLE: Influence of partially hydrolyzed guar gum on constipation  
 in women.  
 AUTHOR: Takahashi H; Wako N; Okubo T; Ishihara N; Yamanaka J;  
 Yamamoto T  
 CORPORATE SOURCE: Central Research Laboratories, Taiyo Kagaku Co. Ltd.,  
 Yokkaichi, Japan.  
 SOURCE: JOURNAL OF NUTRITIONAL SCIENCE AND VITAMINOLOGY, (1994 Jun)  
 40 (3) 251-9.  
 Journal code: 0402640. ISSN: 0301-4800.  
 PUB. COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199412  
 ENTRY DATE: Entered STN: 19950110  
 Last Updated on STN: 19950110  
 Entered Medline: 19941216

AB A partially hydrolyzed guar gum preparation (PHGG, average molecular  
 weight: 20,000), obtained as a water-soluble dietary fiber by digestion of  
 guar gum with beta-D-endomannanase, was administered as a beverage (11 g a  
 day, bid) to 15 constipated women for 3 weeks. Defecating frequency, pH,  
 weight, moisture, and bacterial flora of the feces were  
 investigated and compared with the control periods. Average total dietary  
 fiber taken from food was 9.7 +/- 0.1 g/day during the experiment. PHGG  
 caused an increase in the defecating frequency from 0.46 +/- 0.05  
 (frequency/day, M +/- SE) to 0.63 +/- 0.05. Fecal moisture significantly  
 increased from 69.1% in the control period to 73.8% by ingestion of PHGG.  
 Fecal moisture content also increased consistent with lowering the pH of  
 feces (r = -0.478). The frequency of Lactobacillus spp. occurrence in  
 feces significantly increased (p < 0.05) compared with the control period.  
 These results clearly indicate that PHGG softens and improves the output  
 of feces.

CT Check Tags: Female; Human  
 Adolescent  
 Adult  
 \*Constipation: DT, drug therapy  
 Dietary Fiber  
 Feces: MI, microbiology  
 Galactans: AD, administration & dosage  
 \*Galactans: TU, therapeutic use  
 Hydrogen-Ion Concentration  
 Hydrolysis  
 Lactobacillus: IP, isolation & purification  
 Mannans: AD, administration & dosage  
 \*Mannans: TU, therapeutic use  
 Middle Age

RN 9000-30-0 (guar gum)  
 CN 0 (Galactans); 0 (Mannans)

L222 ANSWER 6 OF 36 MEDLINE

ACCESSION NUMBER: 80248485 MEDLINE  
 DOCUMENT NUMBER: 80248485 PubMed ID: 6156909  
 TITLE: Effects of molecular weight of dextran on the  
 adherence of Streptococcus sanguis to

damaged heart valves.  
 AUTHOR: Ramirez-Ronda C H  
 SOURCE: INFECTION AND IMMUNITY, (1980 Jul) 29 (1) 1-7.  
 Journal code: 0246127. ISSN: 0019-9567.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 198010  
 ENTRY DATE: Entered STN: 19900315  
 Last Updated on STN: 19900315  
 Entered Medline: 19801021

AB Dextran-producing streptococci such as Streptococcus sanguis are the organisms most frequently associated with infective endocarditis in humans. A series of experiments was designed to study how the molecular weight of dextrans affects the **adherence** of an endocarditis strain of S. sanguis to canine heart valves covered with platelets and fibrin. The data indicated that this **adherence** was dependent on dextrans of high molecular weight, such as dextran T-2000 or glucans isolated from S. sanguis or S. mutans. The **adherence** properties of the strain studied were not modified by prior exposure of the **bacterial** cells of valve leaflets to high-molecular-weight dextrans. Preexposure of **bacterial** cells or valve leaflets to low-molecular-weight dextrans decreased their **adherence**. Low-molecular-weight dextrans interfered with **adherence** of dextran-positive strains to damaged heart valves.

CT Check Tags: Animal; Female; Male; Support, U.S. Gov't, Non-P.H.S.  
 \*Dextrans: PD, pharmacology  
 Dogs  
 Heart Valves: IN, injuries  
 \*Heart Valves: MI, microbiology  
 Molecular Weight  
 Streptococcus mutans  
 \*Streptococcus sanguis: PH, physiology

RN 9004-54-0 (Dextrans)

L222 ANSWER 7 OF 36 MEDLINE  
 ACCESSION NUMBER: 68102926 MEDLINE  
 DOCUMENT NUMBER: 68102926 PubMed ID: 6078222  
 TITLE: Susceptibility of mice, guinea pigs and hamsters to challenge with Pasteurella hemolytica and its enhancement by microbial polysaccharides and related compounds.

AUTHOR: Wessman G E  
 SOURCE: JOURNAL OF INFECTIOUS DISEASES, (1967 Dec) 117 (5) 421-8.  
 Journal code: 0413675. ISSN: 0022-1899.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
 ENTRY MONTH: 196803  
 ENTRY DATE: Entered STN: 19900101  
 Last Updated on STN: 19900101  
 Entered Medline: 19680303

CT Check Tags: Animal  
 Cattle  
 Dextrans: PD, pharmacology  
 Guinea Pigs  
 Hamsters  
 Injections, Intraperitoneal

Mice

**Molecular Weight**

\*Pasteurella: PY, pathogenicity

\*Pasteurella Infections: IM, immunology

\*Polysaccharides, Bacterial: PD, pharmacology

Respiratory System: MI, microbiology

Sulfates: PD, pharmacology

RN 9004-54-0 (Dextrans)

CN 0 (Polysaccharides, Bacterial); 0 (Sulfates)

=&gt; d ibib abs 8

L222 ANSWER 8 OF 36 CABA COPYRIGHT 2003 CABI

ACCESSION NUMBER: 94:44610 CABA

DOCUMENT NUMBER: 941403344

TITLE: Enteral nutrition and **medical** foods having soluble fiber

AUTHOR: Greenberg, N. A.

CORPORATE SOURCE: Sandoz Ltd; Sandoz Ltd, Basel, Switzerland.

PATENT INFORMATION: 19930000

SOURCE: United States Patent, No. US 5 260 279, pp. 6.

DOCUMENT TYPE: Patent

LANGUAGE: English

AB An enteral feeding solution is described. The solution contains soluble fibre, especially **hydrolysed guar gum** or pectin. The solution provides nutrients to **colon** cells and prevents bacterial sepsis and diarrhoea.

=&gt; d ibib ab hitrn 9-30

L222 ANSWER 9 OF 36 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

ACCESSION NUMBER: 2000:706937 HCAPLUS

DOCUMENT NUMBER: 133:265962

TITLE: Nutritional compositions which contain slightly negatively charged, non-digestible polysaccharides and the use thereof for reducing transport through **tight junctions**

INVENTOR(S): Bijlsma, Pieter Brandt; Groot, Jacques Alphons; Timmermans, Johannes Wilhelmus; Van Der Meulen, Jan; Kiliaan, Amanda Johanne

PATENT ASSIGNEE(S): N.V. Nutricia, Neth.

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057727	A1	20001005	WO 2000-NL187	20000321
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,				

DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 NL 1011680 C2 20000927 NL 1999-1011680 19990326  
 EP 1164874 A1 20020102 EP 2000-914366 20000321  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO

JP 2002539809 T2 20021126 JP 2000-607492 20000321  
 PRIORITY APPLN. INFO.: NL 1999-1011680 A 19990326  
 WO 2000-NL187 W 20000321

AB The present invention relates to a nutritional compn. which contains slightly neg. charged non-digestible polysaccharides having a mol. wt. of 8 kD to 40,000 kD, characterized in that the rise in the viscosity of the compn. caused by the polysaccharides is less than 20 mPa.s. The invention also relates to the use of this nutritional compn. to reduce the uptake of high mol. wt. substances, allergens and microorganisms through the intestinal wall, more particularly to reduce transport of high mol. wt. substances, allergens and microorganisms through the **tight junctions** in the intestines. The nutritional compns. can be used to prevent or to treat allergies, allergic reactions, sepsis and inflammatory processes, such as those which can arise under emotional and phys. stress, ischemia, reperfusion damage during and after operations, following radiation treatment and/or chemotherapy of cancer patients and in the case of inflammatory intestinal diseases, diarrhea and allergies.

IT 11078-31-2, Glucmannan

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(nutritional compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through **tight junctions**)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 10 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:888452 HCAPLUS

DOCUMENT NUMBER: 137:369114

TITLE: Nutrition additive produced from hydrolysis of brewery yeast and its use

INVENTOR(S): Vuorenmaa, Juhani

PATENT ASSIGNEE(S): Suomen Rehu Oy, Finland; Rautonen, Nina

SOURCE: PCT Int. Appl., 15 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002091850	A1	20021121	WO 2002-FI393	20020508
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
FI 2001001008	A	20021115	FI 2001-1008	20010514

PRIORITY APPLN. INFO.: FI 2001-1008 A 20010514

AB The invention relates to a method for producing a nutrition additive for use for the prevention of intestinal diseases, in which method brewery yeast is filtered and the filtered brewery yeast is treated hydrolytically so that the cellular structure breaks open and the effective concn. of oligo- and/or polysaccharides, beta-glucan and/or proteins on the surface of the cellular structures is increased. The invention relates to the use of a nutrition additive in connection with the feeding of animals, the additive being used in an amt. of 0.1-1.0 w-% of the total amt. of raw material. The invention also relates to the use of the nutrition additive in question for humans for balancing intestinal microbes and preventing intestinal diseases. Thus, brewery yeast was obtained from beer industry and filtered to a dry matter of 18 w%. The filtered brewery yeast was hydrolyzed with an acid at pH of 2-3 for 4 h and at temp. of 70-85 .degree.C. The pH was increased to 4-5 and the product obtained was cooled. The final product can be used as such or it may be dried by known methods.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 11 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:89776 HCAPLUS

DOCUMENT NUMBER: 136:133945

TITLE: Hyperthermophilic .alpha.-galactosidase use for high-temperature hydrolysis of galactose-containing oligosaccharides in animal feeds

INVENTOR(S): Lanahan, Michael B.; Miller, Edward S., Jr.; Kelly, Robert M.

PATENT ASSIGNEE(S): Syngenta Participations A.-G., Switz.

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002007529	A2	20020131	WO 2001-EP8420	20010720
WO 2002007529	A3	20020919		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2002102329	A1	20020801	US 2001-909464	20010719
AU 2001085849	A5	20020205	AU 2001-85849	20010720
EP 1305433	A2	20030502	EP 2001-965142	20010720
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			

PRIORITY APPLN. INFO.: US 2000-220211P P 20000722

WO 2001-EP8420 W 20010720

AB .alpha.-Galactosidases from hyperthermophilic *Thermotoga maritima* are useful in hydrolyzing raffinose, stachyose and verbascose, indigestible oligosaccharides commonly found in animal feed compns. The ability to use these enzymes at high temps. is advantageous for adding nutritive value to

animal feed and flexibility in processing. Hyperthermophilic .alpha.-galactosidases are also useful as food additives for human food. Thus, a polynucleotide encoding a hyperthermophilic .alpha.-galactosidase is cloned and expressed to produce the enzyme.

L222 ANSWER 12 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:367178 HCAPLUS

DOCUMENT NUMBER: 136:339940

TITLE: Feed additive containing hydrolyzed brewers' yeast

INVENTOR(S): Vuorenmaa, Juhani; Virkki, Markku; Jukola, Elias; Lauraeus, Marko; Jatila, Hanna; Apajalahti, Juha; Nurminen, Paivi

PATENT ASSIGNEE(S): Finland

SOURCE: U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 331,708, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6387420	B1	20020514	US 2001-862389	20010521
US 2002061345	A1	20020523		
WO 9827829	A1	19980702	WO 1997-FI831	19971222

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: FI 1996-5192 A 19961223

WO 1997-FI831 W 19971222

US 1999-331708 B2 19990818

AB Hydrolyzed brewers' yeast contg. oligosaccharides and(or) polysaccharides was filtered and hydrolyzed to break open the cell walls. The feed additive decreased adherence of Escherichia coli to mucous membranes of pig intestines, prevented diarrhea in piglets, and improved growth.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 13 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:835261 HCAPLUS

DOCUMENT NUMBER: 138:55199

TITLE: Bacterial responses to different dietary cereal types and xylanase supplementation in the intestine of broiler chicken

AUTHOR(S): Huebener, Katrin; Vahjen, W.; Simon, O.

CORPORATE SOURCE: Institute of Animal Nutrition, Faculty of Veterinary Medicine, Free University of Berlin, Germany

SOURCE: Archives of Animal Nutrition (2002), 56(3), 167-187

CODEN: AANUET; ISSN: 0003-942X

PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several studies were carried out to investigate the influence of dietary cereals differing in sol. non starch polysaccharides (NSP) content and a



xylanase prepn. on selected bacterial parameters in the small intestine of broiler chicken. Compared to a maize diet colony forming units (CFU) of mucosa assocd. bacteria were higher in a wheat/rye diet, most notably for enterobacteria and enterococci. Xylanase supplementation to the wheat/rye diet generally led to lower CFU, esp. in the first week of life. However, xylanase supplementation also displayed higher in vitro growth potentials for enterobacteria and enterococci. Bacterial growth of luminal samples in minimal media supplemented with selected NSP showed that the wheat/rye diet enhanced bacterial capacities to utilize NSP only in ileal samples. The xylanase application generally shifted resp. max. growth to the proximal part of the small intestine. The presence of sol. NSP from wheat or rye in the diet per se did not enhance bacterial NSP

**hydrolyzing** enzyme activities in the small intestine, but xylanase supplementation resulted in higher 1,3-1,4-.beta.- glucanase activity. Compared to a maize diet the activity of bacterial bile salt

**hydrolases** in samples of the small intestine was not increased due to inclusion of wheat/rye or triticale to the diet. However, xylanase supplementation led to a redn. with a corresponding increase of lipase activity. It was concluded that dietary cereals producing high intestinal viscosities lead to increased overall bacterial activity in the small intestine. The supplementation of a xylanase to cereal based diets producing high intestinal viscosity, changes compn. and metabolic potential of bacterial populations and may specifically influence fat absorption in young animals.

IT 11078-30-1, Galactomannan

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(bacterial responses to different dietary cereal types and xylanase supplementation in the intestine of broiler chicken)

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 14 OF 36 HCAPLUS COPYRIGHT 2003 ACS.

ACCESSION NUMBER: 2001:693649 HCAPLUS

DOCUMENT NUMBER: 135:238941

TITLE: Intestinal uptake of macromolecules

INVENTOR(S): Niewold, Theodoor Abram; Van Der Meulen, Jan; Nabuurs, Marius Joseph Antonius

PATENT ASSIGNEE(S): Id-Lelystad, Instituut voor Dierhouderij en Diergezondheid B.V., Neth.

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001069238	A2	20010920	WO 2001-NL203	20010312
WO 2001069238	A3	20020207		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: EP 2000-200895 A 20000313

AB The invention relates to the field of gut-(patho)physiol. and is in particular related to the intestinal uptake of fluids, electrolytes and (macro)mols. The invention provides a method for detg. mol. transport through an intestinal wall or segment thereof comprising up- or down-regulating oxygen supply to said wall or segment. Herewith, the invention provides a methodol. for evaluation of the effects of (components of) foods, drinks and specialty foods or drinks related to various different hemodynamic states of a person who consumes the food or drink. The effect of DMSO was measured in samples of intestinal tissue in a diffusion chamber using the horseradish peroxidase method. DMSO increased permeability in a dose-dependent manner.

L222 ANSWER 15 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:359740 HCAPLUS

DOCUMENT NUMBER: 134:339848

TITLE: Nutritional compositions which contain non-digestible polysaccharides and use thereof to reduce transport through **tight junctions**

INVENTOR(S): Kiliaan, Amanda Johanne; Groot, Jacques Alphons; Timmermans, Johannes Wilhelmus; Van Der Meulen, Jan; Van Laere, Katrien Maria Jozefa; Bijlsma, Pieter Brandt

PATENT ASSIGNEE(S): N.V. Nutricia, Neth.

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001033975	A1	20010517	WO 2000-NL697	20000929
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NL 1013175	C2	20010330	NL 1999-1013175	19990929
EP 1217902	A1	20020703	EP 2000-970318	20000929
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003513893	T2	20030415	JP 2001-535996	20000929
PRIORITY APPLN. INFO.: NL 1999-1013175 A 19990929				
WO 2000-NL697 W 20000929				

PCT

AB The present invention relates to the use of one or more non-digestible polysaccharides selected from the group consisting of dextrans having a mol. wt. of 8 kD to 40,000 kD, **hydrolyzed** (gluco)mannans having a mol. wt. of 0.5 kD to 1,000 kD and **hydrolyzed** (galacto)mannans having a mol. wt. of 0.5 kD to 1,000 kD for the prepn. of a nutritional compn. to reduce the uptake of high mol. wt. substances, allergens and microorganisms through the intestinal wall, more particularly to reduce transport of high mol. wt. substances, allergens and microorganisms through the **tight junctions** in the intestines, the rise in the viscosity of the nutritional compn. caused by the polysaccharides being less than 20 mPa. The nutritional compns. can be

used to prevent or to treat allergy, allergic reactions, sepsis and inflammatory processes, such as can arise under emotional and phys. stress, ischemia, reperfusion damage during and after operations, after radiation treatment and/or chemotherapy of cancer patients and in the case of inflammatory diseases of the intestine, diarrhea and allergies.

IT 9004-54-0, Dextran, biological studies 11078-30-1,

Galactomannan 11078-31-2, Glucomannan

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(nutritional compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 16 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:767256 HCAPLUS

DOCUMENT NUMBER: 135:317704

TITLE: Compositions containing galactomannan degradation products for taste improvement of sweetening agents

INVENTOR(S): Yokawa, Takeo; Sakanaka, Senji; Ida, Takehiko

PATENT ASSIGNEE(S): Taiyo Kagaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001292722	A2	20011023	JP 2000-107776	20000410
PRIORITY APPLN. INFO.:			JP 2000-107776	20000410
AB The compns. contg. galactomannan degrading products are useful for improvement of taste of sweeteners contg. difructose anhydride, monellin, rubusoside, alitame, Na cyclohexylsulfamate, and/or galactosucrose derivs. Bitterness, astringency, or unpleasant aftertaste are suppressed.				
IT 11078-30-1DP, Galactomannan, hydrolyzates				
RL: BPN (Biosynthetic preparation); FFD (Food or feed use); MOA (Modifier or additive use); BIOL (Biological study); PREP (Preparation); USES (Uses) (galactomannan degrading products for taste improvement of sweetening agents)				

L222 ANSWER 17 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:406802 HCAPLUS

DOCUMENT NUMBER: 135:18921

TITLE: Use of a non-starch-polysaccharide (NSP) hydrolyzing enzyme as feed supplement for laying hens

AUTHOR(S): Oloffs, Kerstin; Jeroch, Heinz; Sorensen, Proben

CORPORATE SOURCE: Institut für Ernährungswissenschaften, Martin-Luther-Universität Halle-Wittenberg, Halle, D-06108, Germany

SOURCE: Archiv fuer Tierzucht (2001), 44(3), 329-337

CODEN: ARTZAJ; ISSN: 0003-9438

PUBLISHER: Forschungsinstitut fuer die Biologie Landwirtschaftlicher Nutztiere

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The effect of a multi-enzyme complex hydrolyzing non-starch polysaccharides on performance parameters, nutrient digestibility, and

metabolizable energy was studied in laying hens. Two feeds (24% barley, 23% rye, 23% sunflower seed and 19% wheat, 25% rye, 20% sunflower seed, resp.) were used in 2 dosages. A pos. influence of enzyme supplementation on the redn. of dirty eggs was obsd. in both rations.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 18 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:108215 HCAPLUS

DOCUMENT NUMBER: 132:250496

TITLE: Effect of a phosphorylated guar gum hydrolysate on increased calcium solubilization and the promotion of calcium absorption in rats

AUTHOR(S): Watanabe, Osamu; Hara, Hiroshi; Kasai, Takanori  
CORPORATE SOURCE: Department of Bioscience and Chemistry, Faculty of Agriculture, Hokkaido University, Sapporo, 060-8589, Japan

SOURCE: Bioscience, Biotechnology, and Biochemistry (2000), 64(1), 160-166

CODEN: BBBIEJ; ISSN: 0916-8451

PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The effect of a phosphorylated guar gum hydrolyzate (P-GGH) on Ca solubilization and influence on Ca intestinal absorption were studied in vitro and in rats. P-GGH was prepd. by chem. modifying GGH with Na metaphosphate. P-GGH inhibited the pptn. of Ca phosphate in vitro. The apparent Ca absorption and femur bone Ca levels were higher in rats fed P-GGH (50 g/kg feed) than in rats fed GGH (50 g/kg feed) or the control diet. The amt. of sol. Ca in the ileal content was higher in the P-GGH than in the GGH group. The intestinal content levels of volatile fatty acids, lactate, and succinate were detd. Thus, P-GGH may inhibit Ca phosphate formation in the lower small intestine and increase Ca absorption.

IT 9000-30-0, Guar gum

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses) (dietary phosphorylated guar gum **hydrolyzate** increases calcium solubilization and small intestinal absorption in rats)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 19 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:346805 HCAPLUS

DOCUMENT NUMBER: 131:101670

TITLE: Ingestion of guar-gum hydrolysate partially restores calcium absorption in the large intestine lowered by suppression of gastric acid secretion in rats

AUTHOR(S): Hara, Hiroshi; Suzuki, Takuya; Kasai, Takanori; Aoyama, Yoritaka; Ohta, Atsutane

CORPORATE SOURCE: Department of Bioscience and Chemistry, Faculty of Agriculture, Hokkaido University, Sapporo, 060-8589, Japan

SOURCE: British Journal of Nutrition (1999), 81(4), 315-321  
CODEN: BJNUAV; ISSN: 0007-1145

PUBLISHER: CABI Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We examd. the effects of feeding guar gum hydrolyzate (GGH), a highly

fermentable form of dietary fiber with low viscosity, on Ca and Mg absorption in the small and large intestines in rats under conditions in which gastric acid secretion was suppressed by the proton pump inhibitor omeprazole. We also examd. the role of cecum in these effects. Diets without or with GGH (50 g/kg feed), omeprazole or vehicle injections, and sham or cecectomy operations were combined. The apparent Ca absorption was lower in rats given omeprazole (30 mg/kg body wt./day) for 8 days than in rats given the vehicle. GGH ingestion led to partial restoration of Ca absorption decreased by omeprazole. This increment in Ca absorption was not sufficient to meet the requirements because the dietary Ca level (3.0 g/kg feed) was the min. requirement for the intact rats. The small increment in Ca absorption caused by GGH was completely abolished by cecectomy. Sol. Ca pools in the cecal and colonic contents were increased by feeding GGH, and the sol. Ca concns. were much higher than the Kt values of the Ca active transport system in the large intestine or the blood serum Ca concns. The Ca solubilization may not be a limiting factor for Ca absorption in the large intestine. The apparent Mg absorption was clearly lower in cecectomized rats than in sham-operated rats, and higher in the GGH-fed groups than in the GGH-free groups even in cecectomized rats. Thus, Ca absorption lowered by inhibition of gastric acid secretion is partially restored in rats by GGH, but the increment is not sufficient to meet the dietary requirements.

IT 9000-30-0, Guar gum

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(guar gum hydrolyzate ingestion partially restores large intestine Ca absorption lowered by omeprazole in rats)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 20 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:392202 HCAPLUS

DOCUMENT NUMBER: 131:43967

TITLE: The efficiency of non-starch-polysaccharide hydrolyzing enzymes on nutrient digestibility and gross energy convertibility of barley/rye and wheat/rye diets for laying hens

AUTHOR(S): Oloffs, Kerstin; Jeroch, H.; Schoner, F.-J.

CORPORATE SOURCE: Landwirtschaftliche Fak., Inst. Tierernahrung Vorratshaltung, Martin-Luther-Univ., Halle/Saale, D-06108, Germany

SOURCE: Archives of Animal Nutrition (1999), 52(2), 155-165

CODEN: AANUET; ISSN: 0003-942X

PUBLISHER: Harwood Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The efficiency of .beta.-glucanase or xylanase contg. enzymes supplemented to rations for laying hens on the basis of barley-rye and wheat-rye were tested in two balance expts. Five diets for eight hens each (White Lohmann Leghorn Hybrids) have been proved. The balances were carried out in the 23rd and 29th week of life. Statistically significant differences in the digestibility of nutrients like protein, fat and starch as well in the transformation of gross energy and metabolizable energy appeared esp. in the first balance period. In the second balance period the starch digestibility was increased significantly from 93.7% to 99.7% by enzyme supplementation of the barley-rye rations. A pos. influence of enzymes on the ileal digestibility of starch and fat could also be found. The addn. of enzymes led to a decreasing reaction of the viscosity in the feed, in the different parts of the digesta and in the excreta.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 21 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:12860 HCAPLUS

DOCUMENT NUMBER: 132:77929

TITLE: Effects of carbohydrate-hydrolysing enzymes in weaned piglets fed diets based on peas and wheat

AUTHOR(S): Nonn, H.; Kluge, H.; Jeroch, H.; Broz, J.

CORPORATE SOURCE: Institut Tierernahrung Vorratshaltung, Martin-Luther-Univ., Halle/Saale, D-06108, Germany

SOURCE: Agribiological Research (1999), 52(2), 137-144

CODEN: AGRREE; ISSN: 0938-0337

PUBLISHER: VDLUFA-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The efficacy of 2 enzyme prepsns. (Roxazyme G, a *Trichoderma viride* enzyme complex, and .alpha.-galactosidase) used either sep. or in combination, was evaluated in weaned swine fed a diet contg. 40% peas. The diets included in addn. to peas 43% wheat, 13% soybean meal, 3% vitamin-mineral-premix and free amino acids. The expt. included 4 diets, a control diet without enzyme supplementation (treatment I) and three exptl. treatments with the following enzyme supplementation per kg feed: 200 mg Roxazym G (treatment II), 1 mL .alpha.-galactosidase 1000 L (treatment III), and 200 mg Roxazym G plus 1 mL .alpha.-galactosidase 1000 L (treatment IV). The diets were tested in a balance trial and a growth expt. Digestibility detns. were carried out with castrated males (5 animals per treatment) aged about 6 wk at the beginning of the balance period. The mean live wt. of the pigs was 14.7 kg. In the growth trial, 18 swine (9 females and 9 castrates) were assigned to each dietary treatment. The animals were 29 days old (28-day weaning) and the mean wt. was 7.8 kg. The swine were kept in flat-deck pens (1.5 m .times. 1.2 m); one female and one castrate were housed together in each pen. No significant effects of enzyme supplementation were obsd. on the digestibility of crude nutrients, feed intake, growth rate or feed conversion. In the balance trial, however, the addn. of .alpha.-galactosidase resulted in a trend towards increased digestibility of crude fiber (from 63.4% to 74.1%) and cellulose (from 72.9% to 77.6%). In the growth trial, .alpha.-galactosidase supplementation numerically increased both feed intake and growth rate during the first 14-day period. Considering the high proportion of peas in the exptl. diets (40%), very satisfactory daily gains of 412 g to 469 g were achieved in the growth period from 8 kg to 24 kg live wt.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 22 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:57498 HCAPLUS

DOCUMENT NUMBER: 130:209179

TITLE: Ingestion of guar gum hydrolyzate, a soluble fiber, increases calcium absorption in totally gastrectomized rats

AUTHOR(S): Hara, Hiroshi; Suzuki, Takuya; Kasai, Takanori; Aoyama, Yoritaka; Ohta, Atsutane

CORPORATE SOURCE: Department of Bioscience and Chemistry, Faculty of Agriculture, Hokkaido University, Sapporo, 060-8589, Japan

SOURCE: Journal of Nutrition (1999), 129(1), 39-45

CODEN: JONUAI; ISSN: 0022-3166

PUBLISHER: American Society for Nutritional Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Gastrectomy induces osteopenia. We examd. the effects of feeding guar gum hydrolyzate (GGH, 50 g/kg diet) on the intestinal Ca absorption and bone mineralization in totally gastrectomized (esophagojejunostomized) rats in comparison with laparotomized and bypassed rats. In the bypassed rats, chyme bypassed the duodenum and upper jejunum without gastrectomy. The apparent absorption of Ca supplied as a water-insol. salt was >50% lower in gastrectomized rats than in intact (laparotomized) or bypassed rats 3 wk after the start of feeding the test diets. Ca absorption was higher in gastrectomized rats fed the GGH diet than in rats fed the GGH-free diet. In the second expt., we compared the Ca absorption and bone mineralization in gastrectomized rats fed diets contg. sol. and insol. Ca salts and in bypassed rats fed insol. Ca. The absorption of sol. Ca in the gastrectomized rats did not differ from absorption of Ca from CaCO<sub>3</sub> in bypassed rats. The sol. Ca pool in the cecal content was lower in gastrectomized rats (Expt. 1) than in intact or bypassed control rats, and was higher in the GGH-fed gastrectomized rats than in those fed the GGH-free diet. Ca absorption correlated most closely ( $r = 0.787$ ) with the cecal propionic acid concn. among the org. acids studied. The femur Ca content was lower in gastrectomized rats fed insol. Ca than in bypassed rats fed the same diet, but was partially restored in the rats fed sol. Ca (Expt. 2). Bone Ca was not increased by feeding GGH in gastrectomized rats (Expt. 1). Thus, the severely diminished Ca absorption following total gastrectomy is totally due to decreased Ca solubilization and feeding GGH partially restores the Ca absorption. The decrease in bone Ca due to gastrectomy is mainly due to diminished intestinal Ca absorption.

IT 9000-30-0, Guar gum

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(dietary guar gum **hydrolyzate** effects on Ca absorption and bone mineralization in totally gastrectomized rats)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 23 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:392192 HCAPLUS

DOCUMENT NUMBER: 131:44197

TITLE: Biochemical characteristics of non starch polysaccharide hydrolyzing enzyme preparations designed as feed additives for poultry and piglet nutrition

AUTHOR(S): Vahjen, W.; Simon, O.

CORPORATE SOURCE: Faculty Veterinary Medicine, Inst. Animal Nutrition, Free Univ. Berlin, Berlin, D-14195, Germany

SOURCE: Archives of Animal Nutrition (1999), 52(1), 1-14

CODEN: AANUET; ISSN: 0003-942X

PUBLISHER: Harwood Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Com. microbial non starch polysaccharide hydrolyzing enzyme preps. designed as feed additive were investigated for biochem. characteristics and for their stability in in vitro digesta incubations. They were composed of .ltoreq.9 (1-3, 1-4)-.beta.-glucanase activities and .ltoreq.6 xylanase activities with different mol. wts. (100-18 kDa). Partially purified enzyme fractions differed in terms of pH-optima, isoelec. point, and thermal stability in aq. solns. Different .beta.-glucanase activities were found in different prodn. strains, although some enzymes were conserved over genus boundaries. Enzyme preps. from the same or related strains exhibited different patterns of enzyme activity. Some enzyme preps. contained significant amts. of polygalacturonase and/or galactomannase activity. The pH profiles of whole enzyme preps. resulted from pH optima of isoenzyme fractions. Temp. optima were 50-60.degree..

Thermal stability was highest in fractions with cellulase activity .gtoreq. (1-3, 1-4)-.beta.-glucanase activities .gtoreq. xylanase activities. Incubation of enzyme preps. in digesta supernatants of chicken gizzard showed most inactivation of xylanase activity compared to duodenal, jejunal, and ileal digesta.

IT 11078-30-1, Galactomannan

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(substrates of non starch polysaccharide **hydrolyzing** enzymes designed as feed additives)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 24 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:479369 HCAPLUS

DOCUMENT NUMBER: 129:94714

TITLE: Oligosaccharide- or polysaccharide-rich hydrolytically treated food or feed additive to prevent gastric disorders and intestinal diseases

INVENTOR(S): Vuorenmaa, Juhani; Virkki, Markku; Jukola, Elias; Laureus, Marko; Jatila, Hanna

PATENT ASSIGNEE(S): Suomen Rehu Oy, Finland

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9827829	A1	19980702	WO 1997-FI831	19971222
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9878699	A1	19980717	AU 1998-78699	19971222
EP 946108	A1	19991006	EP 1997-948938	19971222
R:	BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT			
EE 3798	B1	20020815	EE 1999-311	19971222
EE 9900311	A	20000215		
RU 2196437	C2	20030120	RU 1999-115474	19971222
LV 12340	B	19991220	LV 1999-100	19990618
NO 9903101	A	19990823	NO 1999-3101	19990622
LT 4656	B	20000525	LT 1999-77	19990622
US 6387420	B1	20020514	US 2001-862389	20010521
US 2002061345	A1	20020523		

PRIORITY APPLN. INFO.:

FI 1996-5192 A 19961223

WO 1997-FI831 W 19971222

US 1999-331708 B2 19990818

AB A food or feed additive is produced by treating plant, animal and(or) microbial products that contain oligosaccharides and(or) polysaccharides hydrolytically so that the cell wall structure is opened. The food or feed additive is used to prevent gastric disorders and intestinal diseases. Thus, a fraction prepd. from bakers' yeast inhibited the adhesion of Escherichia coli to the mucous membrane of pigs by 70-90%.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L222 ANSWER 25 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:341719 HCAPLUS

DOCUMENT NUMBER: 129:15449

TITLE: Non starch polysaccharide hydrolyzing enzymes as feed additives. Detection of enzyme activities and problems encountered with quantitative determination in complex samples

AUTHOR(S): Vahjen, W.; Glaeser, Karola; Froeck, M.; Simon, O.

CORPORATE SOURCE: Institute Animal Nutrition, Special Branch Veterinary Science, Free University Berlin, Berlin, D-14195, Germany

SOURCE: Archives of Animal Nutrition (1997), 50(4), 331-345

CODEN: AANUET; ISSN: 0003-942X

PUBLISHER: Harwood Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chromogenic substrates, an agar diffusion assay, and viscosity redn. were used to est. .beta.-glucanase and xylanase activities in water-sol. exts. of different feedstuffs and digesta supernatants (DS). The dinitrosalicylic acid reducing sugar method was employed to calibrate results from different methods based on IU, glucose equiv. The detection of dye release from chromogenic substrates was a suitable method, allowing the detection of 0.05 IU of enzyme activity per mL of ext., although measurements in DS were limited in linearity (0.1-0.5 IU/mL DS). With the agar diffusion assay the detection of enzyme activity was possible over a wider concn. range (exts. 0.05-1 IU/mL, DS 0.1-1 IU/mL), but visual evaluation led to inaccurate measurement. Accuracy can be improved by computer based evaluation of digital images. The use of viscosity redn. produced linear std. curves from 0.01-0.5 IU/mL in feed exts., but reliability of measurements depended on modification of substrates. Quantification of enzyme activities was influenced by matrix effects of complex samples. Cereal-dependant differences were found in various exts. of feed mixts. and cereal exts. DS partly inhibited enzyme activity, depending on the origin of the sample. Interaction of substrates with digesta components varied between methods. The sensitivity of the methods is comparable. All methods require specific calibrations to account for matrix- and enzyme-specific effects.

L222 ANSWER 26 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:76027 HCAPLUS

DOCUMENT NUMBER: 120:76027

TITLE: Natural polysaccharides for inhibiting swelling of starch-containing food

INVENTOR(S): Tokunaga, Takahisa; Iwasaki, Mitsukazu; Hirayama, Masao; Kajiwarra, Junko

PATENT ASSIGNEE(S): Meiji Seika Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05276882	A2	19931026	JP 1992-98490	19920326
JP 2807593	B2	19981008		

PRIORITY APPLN. INFO.: JP 1992-98490 19920326  
 AB Natural polysaccharides or their hydrolyzates contg. .gtoreq.1 of glucose, mannose, and galactose are used for inhibiting the swelling of starch-contg. food. The natural polysaccharides are selected from guar gum, locust bean gum, tara gum, arabia gum, glucomannan, arabinogalactan, and tamarind gum. The compn. improves the texture of starch-contg. food without giving undesirable flavor. Cooking rice in the presence of hydrolyzates of guar gum, arabia gum, or arabinogalactan was shown.  
 IT 11078-31-2D, Glucomannan, hydrolyzates  
 RL: BIOL (Biological study)  
 (swelling of starch-contg. food inhibited by)

L222 ANSWER 27 OF 36 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1993:123372 HCAPLUS  
 DOCUMENT NUMBER: 118:123372  
 TITLE: Low-fat spread containing water-soluble polysaccharides and gelation agents  
 INVENTOR(S): Ishida, Shuzo; Ota, Hiroaki; Nakamura, Toshihiro  
 PATENT ASSIGNEE(S): Taiyo Yushi Co., Ltd., Japan; Terumo Corp.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04278049	A2	19921002	JP 1991-35820	19910301

PRIORITY APPLN. INFO.: JP 1991-35820 19910301  
 AB A water-in-oil emulsion fat spread contains 20-35 wt.% a lipid phase and an aq. phase contg. 8-47 wt.% (of the total spreads) water-sol. polysaccharides and 0.1-6.0 wt.% (of the total spreads) gelation agents. The spread can be manufd. continuously and has good taste. A fat spread contg. gelatin 1.36, xanthan gum 0.32, and polydextrose 8.95 wt.% was made.  
 IT 11078-30-1D, Galactomannan, enzymic hydrolyzate  
 RL: BIOL (Biological study)  
 (low-fat spreads contg. gelation agents and)

L222 ANSWER 28 OF 36 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1989:425232 HCAPLUS  
 DOCUMENT NUMBER: 111:25232  
 TITLE: Preparation and use of granular polysaccharide compositions which dissolve instantly in water  
 INVENTOR(S): Ridoux, Claude  
 PATENT ASSIGNEE(S): SANOFI, Fr.  
 SOURCE: Eur. Pat. Appl., 6 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 313463	A2	19890426	EP 1988-402641	19881020
EP 313463	A3	19891227		
EP 313463	B1	19930324		

R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE

FR 2622198	A1	19890428	FR 1987-14559	19871021
FR 2622198	B1	19920430		
AT 87323	E	19930415	AT 1988-402641	19881020
JP 01159048	A2	19890622	JP 1988-267010	19881021
US 4983583	A	19910108	US 1988-260750	19881021

## PRIORITY APPLN. INFO.:

FR 1987-14559	19871021
EP 1988-402641	19881020

AB The title compns., useful as thickeners, are prepd. by coating polysaccharide particles with gelatin hydrolyzates. Spraying 200 mL 10% aq. gelatin hydrolyzate (mol. wt. 6000) at 10 mL/min and .apprx.20.degree. onto a fluidized bed of 400 g powd. guar gum at 65.degree. in a granulation app. and holding the granules in the bed for another 5 min gave particles with bulk d. 0.251, particle size 31.45% passing a 200-mesh sieve, and time for dispersion of 2 g 9 and 3 s at 20 and 60.degree., resp.

IT 11078-30-1, D-Galacto-D-mannan

RL: PROC (Process)

(granulation of, with gelatin hydrolyzates)

L222 ANSWER 29 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:527843 HCAPLUS

DOCUMENT NUMBER: 109:127843

TITLE: Effect of enteral nutrition on gastrointestinal-tract mucosal growth and adaptation

AUTHOR(S): Weser, Elliot

CORPORATE SOURCE: Med. Serv., Audie L. Murphy Mem. Vet. Hosp., TX, USA

SOURCE: Report of the Ross Conference on Pediatric Research (1988), 94th, 27-34

CODEN: RRRCAP; ISSN: 0557-3467

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In expts. on rats (av. wt. 240 g) receiving total parenteral (i.v.) nutrition, enteral (mid-small intestinal) infusion of glucose (10% and 20%) for 7 days resulted in progressive increases in mucosal mass adjacent to and downstream from the site of infusion. Midgut infusion of increasing concns. of sucrose similarly resulted in progressive increases in mucosal mass downstream of and distal to the site of infusion. The effect of sucrose and other hydrolyzable disaccharides was more potent than that of glucose. When sucrose was infused with a sucrose inhibitor or when nonhydrolyzable sugar (e.g., lactulose) was infused, no increase in mucosal growth was obsd. After 2 days of infusion of a 20% sucrose soln., there was a significant increase in ornithine decarboxylase activity of the proximal ileum, adjacent and distal to the site of infusion, and in mucosal DNA content. After 7 days of infusion, the ornithine decarboxylase activity did not differ from that in untreated controls, whereas the DNA content increased further by 7 days. The obtained data are discussed in relation to the role of intraluminal nutrients in the regulation of small bowel mucosal growth.

L222 ANSWER 30 OF 36 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1985:165565 HCAPLUS

DOCUMENT NUMBER: 102:165565

TITLE: Glucomannan food materials

PATENT ASSIGNEE(S): Sarui, Kazuhiro, Japan; Sarui, Yoshihiro

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59203469	A2	19841117	JP 1983-79520	19830507
JP 02039222	B4	19900904		

PRIORITY APPLN. INFO.: JP 1983-79520 19830507

AB Glucomannan [11078-31-2] or its partial **hydrolyzates** are mixed with Na silicate and gelatinized in a desired form. The material is treated with carboxylic acids and washed to obtain a glucomannan food material which can be used as a health food.

=> d ibib ab 31-36

L222 ANSWER 31 OF 36 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 2002-706886 [76] WPIX  
 DOC. NO. CPI: C2002-200467  
 TITLE: Treating **intestinal** infections in animals, e.g. **Salmonella** infections in pigs, by administration of non-enzymatically degradable oligosaccharide, oligosaccharide derivative or polysaccharide hydrolyzate.  
 DERWENT CLASS: B03 C02 D13 E13  
 INVENTOR(S): KLINGEBERG, M; KOZIANOWSKI, G; KUNZ, M; MUNIR, M; VOGEL, M  
 PATENT ASSIGNEE(S): (SUED-N) SUEZSUCKER AG MANNHEIM/OCHSENFURT  
 COUNTRY COUNT: 27  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002060452	A2	20020808	(200276)*	GE	53
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: AU CA IL JP MX RU US ZA					
DE 10104055	A1	20020814	(200276)		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002060452	A2	WO 2001-EP14867	20011217
DE 10104055	A1	DE 2001-10104055	20010131

*date not good.*  
 ? ←

PRIORITY APPLN. INFO: DE 2001-10104055 20010131

AB WO 200260452 A UPAB: 20021125  
 NOVELTY - The use of carbohydrates (I) is claimed as active agents for treating **intestinal** infections in animals, where (I) is not degradable by enzymes in the digestive tract, is other than lactulose and is selected from oligosaccharides, oligosaccharide derivatives, hydrolyzates of polymeric carbohydrates and their mixtures.  
 DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for animal feedstuffs (specifically dietetic feedstuffs) containing (I).  
 ACTIVITY - Antibacterial; Virucide; Fungicide; Antiparasitic; Antiinflammatory; Antidiarrheic; Analgesic; Antiemetic; Antipyretic.  
 MECHANISM OF ACTION - Improvement of condition of bacterial flora; Prevention of deposition and adhesion of pathogenic bacteria on the **intestinal** epithelium.  
 Some (I) are fermented by the **intestinal** flora to give lower fatty acids (especially butyric acid), lactic acid and/or acetic acid, which reduce the pH in the large **intestine**, promote growth

of non-pathogenic bacteria and inhibit growth of pathogenic bacteria.

Some (I) inhibit deposition of pathogenic bacteria on the **intestinal** epithelium or block the fimbriae of pathogenic bacteria to inhibit adhesion to the **intestinal** epithelium.

USE - (I) are specifically used in monogastric animals (especially pigs or chickens); for curing, preventing, inhibiting the progression of and/or alleviating the symptoms of **intestinal** infections, especially bacterial infections, particularly Salmonella, Escherichia coli or Shigella infections (all claimed).

More generally (I) may be effective against bacterial, viral, fungal and parasitic infections and associated symptoms such as inflammation, diarrhea, visceral pain, nausea, emesis and fever.

A group of 25 Salmonella-infected pigs was given feedstuffs containing lactobionic acid (I') at 0.5 g of carbohydrate per kg of body weight per day. After 7 days, all of the pigs were free of Salmonella infection.

ADVANTAGE - (I) have a good therapeutic effect and high bioavailability, are free of side-effects, can be prepared easily on a large scale and are less expensive than antibiotic or other conventional drugs.

Dwg.0/0

L222 ANSWER 32 OF 36 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 2002-333894 [37] WPIX  
 DOC. NO. CPI: C2002-096565  
 TITLE: Granular foodstuff material comprises granular material containing preset amount of **glucomannan** formed by **hydrolyzing** heat-processing and inner surface has flexible **rigid** layer and surface is soft.  
 DERWENT CLASS: D13  
 PATENT ASSIGNEE(S): (SHIM-N) SHIMIZU KAGAKU KK  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 2002027924	A	20020129	(200237)*		3

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2002027924	A	JP 2000-214118	20000714

PRIORITY APPLN. INFO: JP 2000-214118 20000714

AB JP2002027924 A UPAB: 20020613

NOVELTY - Granular foodstuff material comprises granular material containing at least 60% **glucomannan** gelatinized by **hydrolysis** heat-processing. The inner surface of the granule has a flexible rigid layer and the surface of the granule is soft.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for production of the granular foodstuff material, which involves gelatinization of granular powder or food material containing at least 60% of glucomannan to form the surface of granular foodstuff material with elasticity and surface with rigid layer, by performing heating-fixing gelatinization.

USE - Used as granular health foodstuff material, such as konjak mannan containing food, fish roe-like low calorie foodstuff material.

ADVANTAGE - The granular foodstuff has good elasticity, hence enables effective regulation of **intestine**. The granules are heat-resistant, freeze-resistant and water-resistant. The food can be easily dried and re-swelled.  
Dwg.0/0

L222 ANSWER 33 OF 36 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 2001-376315 [40] WPIX  
 DOC. NO. CPI: C2001-115230  
 TITLE: Production of mannose- and **galactose-containing** oligosaccharides, useful for treatment or prevention of infection, by enzymatic **hydrolysis of galactomannan**.  
 DERWENT CLASS: B04 D13 D16  
 INVENTOR(S): KLINGEBERG, M; KUNZ, M; LUDWIG, E; MUNIR, M; RITTIG, F; VOGEL, M  
 PATENT ASSIGNEE(S): (SUED-N) SUEDZUCKER AG MANNHEIM/OCHSENFURT; (SUED-N) SUEDZUCKER AG  
 COUNTRY COUNT: 28  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19961182	A1	20010621	(200140)*		12
WO 2001044489	A2	20010621	(200140)	GE	
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: AU CA IL JP KR MX RU US					
AU 2001031575	A	20010625	(200162)		
EP 1303632	A2	20030423	(200329)	GE	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19961182	A1	DE 1999-19961182	19991218
WO 2001044489	A2	WO 2000-EP12574	20001212
AU 2001031575	A	AU 2001-31575	20001212
EP 1303632	A2	EP 2000-991171	20001212
		WO 2000-EP12574	20001212

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001031575	A Based on	WO 200144489
EP 1303632	A2 Based on	WO 200144489

PRIORITY APPLN. INFO: DE 1999-19961182 19991218

AB DE 19961182 A UPAB: 20010719

NOVELTY - Production of mannose- and galactose-containing oligosaccharides (I) by **hydrolysis** of an aqueous suspension or solution of **galactomannan** (II) with a bacterial enzyme (III). The product is an aqueous solution of a mixture of (I) with degree of polymerization (DP) below 15.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) (I) produced this way and comprising beta -1,4-linked mannose and alpha -1,6-galactose units;
- (2) enzyme (IIIa) able to hydrolyze (II) and prepared from Bacillus

subtilis DSM 13182;

(3) crude extract, able to hydrolyze (II), produced by lysing cells of DSM 13182;

(4) the strain DSM 13182;

(5) pharmaceutical composition containing (I), optionally also a carrier; and

(6) food or condiment containing (I).

ACTIVITY - Anti-infectious; antitumor; immunostimulatory; anti-inflammatory; anti-osteoporosis; antidiabetic.

MECHANISM OF ACTION - (I) reduce the glycemic index of foods (by inhibiting **intestinal** alpha -glucosidase); inhibit attachment of pathogens to epithelial cells; stimulate the immune system; improve calcium uptake; and stimulate mucus secretion in the **intestines**.

They are fermented in the **colon** to short-chain fatty acids (particularly butyric acid), reducing the pH which favors useful bacteria but inhibits pathogens. Human uroepithelial cells (A) and bacteria (Staphylococcus aureus or Escherichia coli) were incubated together for 30 minutes at 37 deg. C, then non-adherent bacteria separated, (A) washed and the number of germs attached to (A) determined by microscopy. Preincubation of (A) with (I) for 1-3 hr, reduced the number of bacteria (all strains tested) by over 95%.

USE - (I) are used:

(i) in preparation of foods and condiments, particularly to reduce the glycemic index of such products; and

(ii) optionally when included in foods, for therapeutic or prophylactic inhibition of infection, **intestinal** disorders, colonic cancer, inflammation and/or osteoporosis; also to strengthen the immune system and (not claimed) for treatment or prevention of type II diabetes mellitus.

(I) can also be used diagnostically.

ADVANTAGE - (I) are stable against hydrolysis in the mouth, stomach and small **intestines**, so reach the **colon** unchanged.

Dwg.0/0

L222 ANSWER 34 OF 36 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 2001-041723 [06] WPIX  
 DOC. NO. CPI: C2001-012169  
 TITLE: Gelled milk composition useful for treating **intestinal** inflammation containing colostral **protective** factors, obtained by treating colostrum or lactoserum with thickening and/or gelling agent,.  
 DERWENT CLASS: B04  
 INVENTOR(S): BANGE, R; BANGE, V; HEINRICH, H; MEYER, U; TECH, E  
 PATENT ASSIGNEE(S): (BIOM-N) BIOMUN GMBH; (PRIV-N) PRIVATES INST BIOSERV GMBH  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19918210	A1	20001102	(200106)*		4

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19918210	A1	DE 1999-19918210	19990422

PRIORITY APPLN. INFO: DE 1999-19918210 19990422

AB DE 19918210 A UPAB: 20010126

NOVELTY - Production of a gelled milk composition having a high content of colostral protective factors involves treating colostrum or derived lactoserum with thickening and/or gelling agents (I).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a milk composition having a high content of colostral protective factors comprising colostrum or derived lactoserum or whey and (I) at 0.1-1.5%, in the form of a solid gel providing delayed release of the contents.

ACTIVITY - Antiinflammatory; gastrointestinal; antidiarrheal.

MECHANISM OF ACTION - Passive and active immune protection of the **intestinal** mucosa.

USE - Used for the oral prophylaxis and/or therapy of inflammation of the digestive system, especially the **intestinal** tract, in humans or animals.

Typically dyspepsia can be cured; or 4-5 day old calves can be effectively protected against viral and bacterial diarrhea.

ADVANTAGE - The product gives long-lasting immune protection against **intestinal** infections. The contained lactic acid bacteria are safely enclosed in the gel and remain viable for several weeks and they are slowly released and adhere to the **intestinal** epithelium, release antibacterial components and modulate the immune system.  
Dwg.0/0

L222 ANSWER 35 OF 36 WPIX (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 1994-234242 [28] WPIX

CROSS REFERENCE: 1994-234243 [45]; 1994-263658 [32]

DOC. NO. CPI: C1994-106479

TITLE: Coated **chewing** gum prod. - comprises gum pellet coated with coating comprising natural carbohydrate gum hydrolysate.

DERWENT CLASS: D13

INVENTOR(S): HOOK, J S; REED, M A; RICHEY, L C; YATKA, R J

PATENT ASSIGNEE(S): (WRIL) WRIGLEY JR CO WM

COUNTRY COUNT: 38

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9414331	A1	19940707 (199428)*	EN	22	
RW: AT BY CH DE DK ES FR GB KZ LU MW NL PT RU SD SE					
W: AU BB BG BR CA CZ FI HU JP KP KR LK MG MN NO NZ PL RO SK UA US VN					
AU 9457390	A	19940719 (199439)			
EP 746208	A1	19961211 (199703)	EN		
R: DE FR GB					
EP 746208	A4	19970521 (199737)			
AU 694100	B	19980716 (199840)			
CA 2152367	C	19990427 (199935)	EN		
EP 746208	B1	20000906 (200044)	EN		
R: DE FR GB					
DE 69329395	E	20001012 (200059)			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9414331	A1	WO 1993-US11764	19931203
AU 9457390	A	AU 1994-57390	19931203
EP 746208	A1	WO 1993-US11764	19931203
		EP 1994-903442	19931203
EP 746208	A4	EP 1994-903442	



AU 694100	B	AU 1994-57390	19931203
CA 2152367	C	CA 1993-2152367	19931203
		WO 1993-US11764	19931203
EP 746208	B1	WO 1993-US11764	19931203
		EP 1994-903442	19931203
DE 69329395	E	DE 1993-629395	19931203
		WO 1993-US11764	19931203
		EP 1994-903442	19931203

## FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9457390	A	Based on	WO 9414331
EP 746208	A1	Based on	WO 9414331
AU 694100	B	Previous Publ.	AU 9457390
		Based on	WO 9414331
CA 2152367	C	Based on	WO 9414331
EP 746208	B1	Based on	WO 9414331
DE 69329395	E	Based on	EP 746208
		Based on	WO 9414331

PRIORITY APPLN. INFO: WO 1992-US11198 19921223

AB WO 9414331 A UPAB: 20010110

Chewing gum prod. comprises a gum pellet coated with a coating comprising a natural carbohydrate gum hydrolysate.

The natural carbohydrate gums **hydrolysate** is selected from **guar gum hydrolysate**, locust bean gum **hydrolysate**, and/or Karaya gum **hydrolysate**. The hydrolysate material comprises 0.1-20% of the coating. The coating further comprises sucrose, dextrase, maltose, xylitol, maltitol, erythritol, lactitol and/or hydrogenated isomaltulose. The coating comprises a hard shell coating and is non-cariogenic. The coating esp. comprises xylitol and **guar gum hydrolysate**.

USE/ADVANTAGE - The gum prod. has appealable characteristics of a sugar coating regarding appearance, mouth-feel and taste. The coating is high in stability, easy to apply and economical and does not contribute to dental caries or gastro **intestinal** disturbance.  
Dwg.0/0

L222 ANSWER 36 OF 36 WPIX (C) 2003 THOMSON DERWENT  
 ACCESSION NUMBER: 1994-329935 [41] WPIX  
 DOC. NO. CPI: C1994-149920  
 TITLE: Compsn. to treat or prevent liver disease -  
 contg. **galactomannan hydrolysate**  
 prepd. by treating **galactomannan** with  
 beta-mannanase.  
 DERWENT CLASS: B04  
 PATENT ASSIGNEE(S): (TAIC) TAIYO KAGAKU KK  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 06256197	A	19940913	(199441)*		4

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
-----			

JP 06256197 A

JP 1993-67499 19930302

PRIORITY APPLN. INFO: JP 1993-67499 19930302

AB JP 06256197 A UPAB: 19941206

Composition (I) to treat or prevent liver disorder contains low molecular weight galacto mannan (II) with 80 wt.% or more components having straight chain of 30-200 mannose units.

(II) is prepared by **hydrolysis of galactomannan**

(IV). For example, (IV) is incubated with (III) at 40-45 deg.C and pH 3 for 24 hr.; heated at 90 deg.C to denature (III), the resulting water is worked-up to obtain (II). (I) is prepd. from (II) readily: for example, (II) is dissolved in water, apple flavour is added to prepare soft drink.

USE/ADVANTAGE - (I) is useful to treat liver disease associated with the indoles and phenols produced in **colon** as (I) inhibits their formation. Hitherto, antibiotics, lactulose, urease inhibitors, oligosaccharides, Bifidobacterium etc. are used to treat and/or prevent hepatosis, but efficacy of these is insufficient. (I) is a non-toxic composition prepd. by **hydrolysis** of available

**galactomannan** with beta-mannanase (III), and administered orally.

Pref. daily dose of (II) is 0.08-0.83 g/kg.

In an example, (III) (originated from Aspergillus sp. 0.2 pt. wt.) and (IV) (100 pts. wt.) were dissolved in citrate soln. pH3 and incubated at 40-45 deg.C for 24 hr. The hydrolysate was heated at 90 deg.C for 15 min. to denature (III), insoluble material was filtered off, the filtrate was concentrated under reduced pressure, and the residue was spray-dried to obtain (II) which contained above 80 wt.% straight-chain components.  
Dwg.0/1

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FILE 'HOME' ENTERED AT 17:51:01 ON 08 MAY 2003

*Inventor. Search*

KRISHNAN 10/089,371

=> d his

(FILE 'HOME' ENTERED AT 13:21:33 ON 08 MAY 2003)

FILE 'HCAPLUS' ENTERED AT 13:21:41 ON 08 MAY 2003

L1 0 S KIAAN A?/AU  
L2 100 S GROOT J?/AU  
L3 337 S TIMMERMANS J?/AU  
E VAN DER MEUL/AU  
L4 105 S E54-57,E32,E39-41  
L5 50 S VAN LAERE K?/AU  
L6 12 S BIJLSMA P?/AU  
E KIAAN/AU  
L7 590 S L1-6  
L8 10 S L7 AND NUTRITION?  
SELECT RN L8 1-5

FILE 'REGISTRY' ENTERED AT 13:26:26 ON 08 MAY 2003

L9 21 S E85-105

FILE 'HCAPLUS' ENTERED AT 13:27:15 ON 08 MAY 2003

L10 9 S L8 AND L9

*9 Cites w/ 21 cpds displayed*

=&gt; d ibib abs hitstr ind 1-9

L10 ANSWER 1 OF 9 HCAPLUS/ COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:504565 HCAPLUS  
 DOCUMENT NUMBER: 137:46500  
 TITLE: **Nutritional** composition with health promoting action containing oligosaccharides  
 INVENTOR(S): **Van Laere, Katrien Maria Jozefa; Wissing, Elmo**  
 PATENT ASSIGNEE(S): N.V. Nutricia, Neth.  
 SOURCE: PCT Int. Appl., 16 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002051264	A2	20020704	WO 2001-NL940	20011224
WO 2002051264	A3	20021121		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: EP 2000-204776 A 20001227

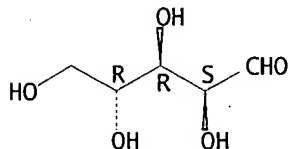
AB A **nutritional** compn. having beneficial effect in the gastrointestinal tract, esp. an anti-adhesion effect on pathogenic micro-organisms and a bifidogenic effect, contains non-digestible oligosaccharides, said oligosaccharides comprising, per daily dosage, 0.3-10 g of oligosaccharides contg. at least one terminal arabinose unit. The **nutritional** compn. may furthermore comprise 0.5-10 g of other non-digestible oligosaccharides selected from fructo-oligosaccharides, galacto-oligosaccharides, xylo-oligosaccharides and manno-oligosaccharides. The arabino-oligosaccharides can be obtained conveniently by controlled hydrolysis of arabinose-contg. polysaccharides from natural (vegetable) origin.

IT 147-81-9, Arabinose  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (**nutritional** compn. with health promoting action contg. oligosaccharides with)

RN 147-81-9 HCAPLUS

CN Arabinose (8CI, 9CI) (CA INDEX NAME)

Relative stereochemistry.



IC ICM A23L001-308  
ICS C07H003-06  
CC 17-10 (Food and Feed Chemistry)  
ST animal **nutrition** health food oligosaccharide  
IT Health food  
(**nutritional** compn. with health promoting action contg.  
oligosaccharides)  
IT Oligosaccharides, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(**nutritional** compn. with health promoting action contg.  
oligosaccharides)  
IT Vegetable  
(**nutritional** compn. with health promoting action contg.  
oligosaccharides from)  
IT Digestive tract  
**Nutrition**, animal  
(**nutritional** compn. with health promoting action contg.  
oligosaccharides in)  
IT 147-81-9, Arabinose  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(**nutritional** compn. with health promoting action contg.  
oligosaccharides with)

L10 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:871354 HCAPLUS

DOCUMENT NUMBER: 136:183126

TITLE: Soluble saccharides, volatile fatty acids and lactic acid in stomach and ileum of pigs fed wheat bran-based diets with and without enzyme treatment

AUTHOR(S): van der Meulen, J.; Inborr, J.; Bakker, J. G. M.

CORPORATE SOURCE: Institute for Animal Science and Health (ID-Lelystad), Lelystad, 8200 AB, Neth.

SOURCE: Digestive Physiology of Pigs, Proceedings of the Symposium, 8th, Uppsala, Sweden, June 20-22, 2000 (2001), Meeting Date 2000, 157-159. Editor(s): Lindberg, J. E.; Ogle, B. CABI Publishing: Wallingford, UK.

CODEN: 69CAUX

DOCUMENT TYPE: Conference

LANGUAGE: English

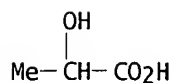
AB Swine were fed diets contg. 40% wheat bran incubated control C1 with a cellulase (Cel-i) or xylanase (Xyl-i) prepn., or with addn. of the cellulase (Cel-a) or xylanase (Xyl-a) prepn. immediately before feeding. Incubation of wheat bran reduced neutral detergent fiber and increased sol. starch, .beta.-glucans and saccharides, esp. for the cellulase prepn. Gastric and ileal arabinose and xylose concns. were higher for most enzyme-treated diets but there were no significant differences in volatile fatty acid and lactic acid concns. It can be concluded that the amt. of sol. saccharides in stomach and small intestine may be increased by cell wall-degrading enzyme preps.

IT 50-21-5, Lactic acid, biological studies 50-99-7, D-Glucose, biological studies 57-48-7, Fructose, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 64-19-7, Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 107-92-6, Butyric acid, biological studies 147-81-9, Arabinose 9005-25-8, Starch, biological studies 9012-54-8, Cellulase 9041-22-9, .beta.-Glucan 37278-89-0, Xylanase

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(sol. saccharides, volatile fatty acids and lactic acid in stomach and  
ileum of swine fed wheat bran-based diets with and without enzyme  
treatment)

RN 50-21-5 HCAPLUS

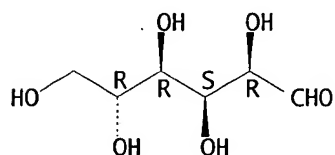
CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



RN 50-99-7 HCAPLUS

CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

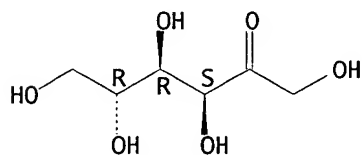
Absolute stereochemistry.



RN 57-48-7 HCAPLUS

CN D-Fructose (9CI) (CA INDEX NAME)

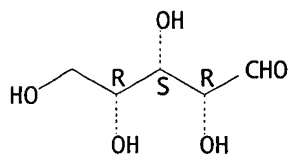
Absolute stereochemistry.



RN 58-86-6 HCAPLUS

CN D-Xylose (9CI) (CA INDEX NAME)

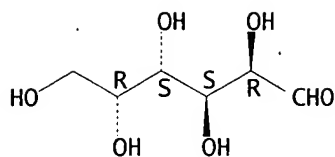
Absolute stereochemistry.



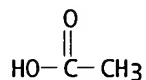
RN 59-23-4 HCAPLUS

CN D-Galactose (9CI) (CA INDEX NAME)

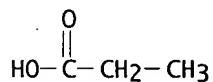
Absolute stereochemistry. Rotation (+).



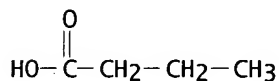
RN 64-19-7 HCAPLUS  
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79-09-4 HCAPLUS  
CN Propanoic acid (9CI) (CA INDEX NAME)

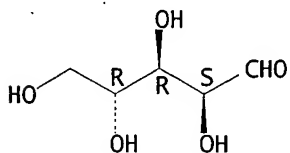


RN 107-92-6 HCAPLUS  
CN Butanoic acid (9CI) (CA INDEX NAME)



RN 147-81-9 HCAPLUS  
CN Arabinose (8CI, 9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 9005-25-8 HCAPLUS  
CN Starch (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9012-54-8 HCAPLUS  
CN Cellulase (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9041-22-9 HCAPLUS  
CN .beta.-D-Glucan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 37278-89-0 HCAPLUS

CN Xylanase (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 18-6 (Animal Nutrition)

ST swine **nutrition** enzyme wheat bran monosaccharide fatty acid lactate; xylanase swine **nutrition** wheat bran monosaccharide fatty acid lactate; cellulase swine **nutrition** wheat bran monosaccharide fatty acid lactate

IT Intestinal content

(ileal; sol. saccharides, volatile fatty acids and lactic acid in stomach and ileum of swine fed wheat bran-based diets with and without enzyme treatment)

IT Fatty acids, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (short-chain; sol. saccharides, volatile fatty acids and lactic acid in stomach and ileum of swine fed wheat bran-based diets with and without enzyme treatment)

IT Dietary fiber

Feed additives

Feeding experiment

**Nutrition**, animal

Stomach content

Swine

Urine

Wheat bran

(sol. saccharides, volatile fatty acids and lactic acid in stomach and ileum of swine fed wheat bran-based diets with and without enzyme treatment)

IT Carbohydrates, biological studies

Monosaccharides

RL: BSU (Biological study, unclassified); BIOL (Biological study) (sol. saccharides, volatile fatty acids and lactic acid in stomach and ileum of swine fed wheat bran-based diets with and without enzyme treatment)

IT 50-21-5, Lactic acid, biological studies 50-99-7, D-Glucose, biological studies 57-48-7, Fructose, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 64-19-7, Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 107-92-6, Butyric acid, biological studies 147-81-9, Arabinose 9005-25-8, Starch, biological studies 9012-54-8, Cellulase 9041-22-9, .beta.-Glucan 37278-89-0, Xylanase

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(sol. saccharides, volatile fatty acids and lactic acid in stomach and ileum of swine fed wheat bran-based diets with and without enzyme treatment)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:588508 HCAPLUS

DOCUMENT NUMBER: 136:69244

TITLE: Effects of cell wall degrading enzymes on carbohydrate fractions and metabolites in stomach and ileum of pigs fed wheat bran based diets

AUTHOR(S): Van Der Meulen, J.; Inborr, J.; Bakker, J. G. M.



CORPORATE SOURCE: Institute for Animal Science and Health (ID-Lelystad),  
Lelystad, 8200 AB, Neth.  
SOURCE: Archives of Animal Nutrition (2001), 54(2), 101-115  
CODEN: AANUET; ISSN: 0003-942X  
PUBLISHER: Harwood Academic Publishers  
DOCUMENT TYPE: Journal  
LANGUAGE: English

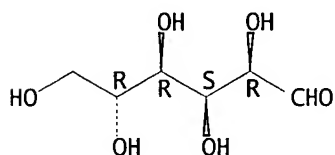
AB Pigs were fed diets contg. 40% wheat bran that were incubated with water/acetic acid mixt. (control, C) alone or contg. cellulase (Cel-i) or xylanase (Xyl-i) prepn. or that were mixed with the cellulase (Cel-a) or xylanase (Xyl-a) prepn. immediately before feeding. Stomach and ileal samples were analyzed for pH, osmolality, sol. saccharides, volatile fatty acids (VFA), and lactate. Incubation of wheat bran decreased the levels of neutral detergent fiber (NDF) and increased the levels of sol. starch, .beta.-glucans, and other saccharides (glucose, xylose, arabinose), esp. after incubation with the cellulase prepn. At 2 h after feeding, higher arabinose and xylose concns. were found in the stomach with diets Cel-i, Cel-a, and Xyl-i. In the ileum the xylose and arabinose concns. were higher 2-4 and 6-8 h after feeding the enzyme-treated diets. In the stomach and ileum there were no differences between the diets in pH, osmolality, VFA, and lactic acid concns., but the ileal VFA concns. from 4 h after feeding tended to be higher with diets Cel-i and Xyl-i. Thus, the amts. of sol. saccharides in the stomach and small intestine and the ileal VFA concns. may be increased by cell wall degrading enzyme prepn.

IT 50-99-7, D-Glucose, biological studies 57-48-7, Fructose, biological studies 58-86-6, Xylose, biological studies 59-23-4, Galactose, biological studies 64-19-7, Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 107-92-6, Butyric acid, biological studies 147-81-9, Arabinose  
RL: BCP (Biochemical process); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)  
(dietary cellulase and xylanase cell wall-degrading enzyme additives added or incubated with wheat bran-based diets effects on carbohydrate fractions and metabolites in stomach and ileum contents of pigs)

RN 50-99-7 HCAPLUS

CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

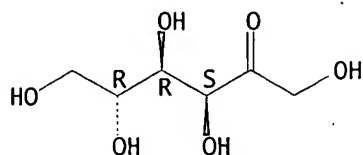
Absolute stereochemistry.



RN 57-48-7 HCAPLUS

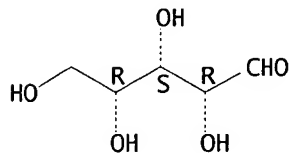
CN D-Fructose (9CI) (CA INDEX NAME)

Absolute stereochemistry.



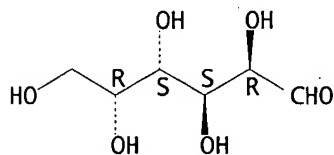
RN 58-86-6 HCAPLUS  
CN D-Xylose (9CI) (CA INDEX NAME)

Absolute stereochemistry.

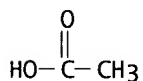


RN 59-23-4 HCAPLUS  
CN D-Galactose (9CI) (CA INDEX NAME)

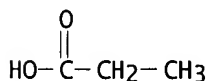
Absolute stereochemistry. Rotation (+).



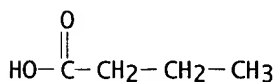
RN 64-19-7 HCAPLUS  
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79-09-4 HCAPLUS  
CN Propanoic acid (9CI) (CA INDEX NAME)

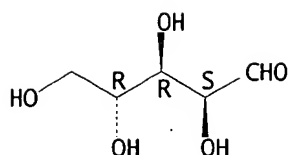


RN 107-92-6 HCAPLUS  
CN Butanoic acid (9CI) (CA INDEX NAME)



RN 147-81-9 HCAPLUS  
CN Arabinose (8CI, 9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 9012-54-8, Cellulase 37278-89-0, Xylanase  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (dietary cellulase and xylanase cell wall-degrading enzyme additives  
 added or incubated with wheat bran-based diets effects on carbohydrate  
 fractions and metabolites in stomach and ileum contents of pigs)

RN 9012-54-8 HCAPLUS

CN Cellulase (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 37278-89-0 HCAPLUS

CN Xylanase (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 18-6 (Animal Nutrition)

ST swine nutrition wheat bran digestibility cellulase xylanase  
 additive

IT Digestibility

Feed additives

Intestinal content

Nutrition, animal

Osmolality

Stomach content

Swine

Wheat bran

(dietary cellulase and xylanase cell wall-degrading enzyme additives  
 added or incubated with wheat bran-based diets effects on carbohydrate  
 fractions and metabolites in stomach and ileum contents of pigs)

IT Fatty acids, biological studies

RL: BCP (Biochemical process); FFD (Food or feed use); BIOL (Biological  
 study); PROC (Process); USES (Uses)

(short-chain; dietary cellulase and xylanase cell wall-degrading enzyme  
 additives added or incubated with wheat bran-based diets effects on  
 carbohydrate fractions and metabolites in stomach and ileum contents of  
 pigs)

IT 50-99-7, D-Glucose, biological studies 57-48-7,

Fructose, biological studies 58-86-6, Xylose, biological studies

59-23-4, Galactose, biological studies 64-19-7, Acetic

acid, biological studies 79-09-4, Propionic acid, biological

studies 107-92-6, Butyric acid, biological studies

147-81-9, Arabinose

RL: BCP (Biochemical process); FFD (Food or feed use); BIOL (Biological  
 study); PROC (Process); USES (Uses)

(dietary cellulase and xylanase cell wall-degrading enzyme additives  
 added or incubated with wheat bran-based diets effects on carbohydrate  
 fractions and metabolites in stomach and ileum contents of pigs)

IT 9012-54-8, Cellulase 37278-89-0, Xylanase

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(dietary cellulase and xylanase cell wall-degrading enzyme additives  
 added or incubated with wheat bran-based diets effects on carbohydrate  
 fractions and metabolites in stomach and ileum contents of pigs)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS

## RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:359740 HCAPLUS

DOCUMENT NUMBER: 134:339848

TITLE: **Nutritional** compositions which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions

INVENTOR(S): Kiliaan, Amanda Johanne; Groot, Jacques Alphons; Timmermans, Johannes Wilhelmus ; Van Der Meulen, Jan; Van Laere, Katrien Maria Jozefa; Bijlsma, Pieter Brandt

PATENT ASSIGNEE(S): N.V. Nutricia, Neth.

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001033975	A1	20010517	WO 2000-NL697	20000929
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
NL 1013175	C2	20010330	NL 1999-1013175	19990929
EP 1217902	A1	20020703	EP 2000-970318	20000929
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
JP 2003513893	T2	20030415	JP 2001-535996	20000929
PRIORITY APPLN. INFO.:			NL 1999-1013175 A	19990929
			WO 2000-NL697 W	20000929

AB The present invention relates to the use of one or more non-digestible polysaccharides selected from the group consisting of dextrans having a mol. wt. of 8 kD to 40,000 kD, hydrolyzed (gluco)mannans having a mol. wt. of 0.5 kD to 1,000 kD and hydrolyzed (galacto)mannans having a mol. wt. of 0.5 kD to 1,000 kD for the prepn. of a **nutritional** compn. to reduce the uptake of high mol. wt. substances, allergens and microorganisms through the intestinal wall, more particularly to reduce transport of high mol. wt. substances, allergens and microorganisms through the tight junctions in the intestines, the rise in the viscosity of the **nutritional** compn. caused by the polysaccharides being less than 20 mPa. The **nutritional** compns. can be used to prevent or to treat allergy, allergic reactions, sepsis and inflammatory processes, such as can arise under emotional and phys. stress, ischemia, reperfusion damage during and after operations, after radiation treatment and/or chemotherapy of cancer patients and in the case of inflammatory diseases of the intestine, diarrhea and allergies.

IT 9004-54-0, Dextran, biological studies 11078-30-1, Galactomannan 11078-31-2, Glucomannan  
 RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (**nutritional** compns. which contain non-digestible

polysaccharides and use thereof to reduce transport through tight junctions)

RN 9004-54-0 HCAPLUS

CN Dextran (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11078-30-1 HCAPLUS

CN D-Galacto-D-mannan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11078-31-2 HCAPLUS

CN D-Gluco-D-mannan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM A23L001-054

ICS A23L001-0528; A23L001-0526; A61K031-715; A61P003-02

CC 17-6 (Food and Feed Chemistry)

Section cross-reference(s): 63

ST food feed additive nondigestible polysaccharide intestine disorder;  
allergen inflammation food additive nondigestible polysaccharide

IT Reperfusion

(damage; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Food

(dietetic; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Nutrition, animal

(enteral; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Swine

(feed additives; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Intestine, disease

(inflammatory; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Allergy inhibitors

Anti-inflammatory agents

Antidiarrheals

Biological transport

Chemotherapy

Drug delivery systems

Feed additives

Food additives

Food functional properties

Food viscosity

Intestinal content

Ischemia

Microorganism

Radiation damage

Sepsis

(**nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Allergens

RL: ADV (Adverse effect, including toxicity); BPR (Biological process);

BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Polysaccharides, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Beverages

(sports; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT Stress, animal

(transport; **nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

IT 9004-54-0, Dextran, biological studies 11078-30-1,

Galactomannan 11078-31-2, Glucomannan

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**nutritional** compns. which contain non-digestible polysaccharides and use thereof to reduce transport through tight junctions)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:706937 HCAPLUS

DOCUMENT NUMBER: 133:265962

TITLE: **Nutritional** compositions which contain slightly negatively charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions

INVENTOR(S): Bijlsma, Pieter Brandt; Groot, Jacques Alphons; Timmermans, Johannes Wilhelmus ; Van Der Meulen, Jan; Kiliaan, Amanda Johanne

PATENT ASSIGNEE(S): N.V. Nutricia, Neth.

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057727	A1	20001005	WO 2000-NL187	20000321
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
NL 1011680	C2	20000927	NL 1999-1011680	19990326

EP 1164874 A1 20020102 EP 2000-914366 20000321  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO

JP 2002539809 T2 20021126 JP 2000-607492 20000321  
 PRIORITY APPLN. INFO.: NL 1999-1011680 A 19990326  
 WO 2000-NL187 W 20000321

AB The present invention relates to a **nutritional** compn. which contains slightly neg. charged non-digestible polysaccharides having a mol. wt. of 8 kD to 40,000 kD, characterized in that the rise in the viscosity of the compn. caused by the polysaccharides is less than 20 mPa.s. The invention also relates to the use of this **nutritional** compn. to reduce the uptake of high mol. wt. substances, allergens and microorganisms through the intestinal wall, more particularly to reduce transport of high mol. wt. substances, allergens and microorganisms through the tight junctions in the intestines. The **nutritional** compns. can be used to prevent or to treat allergies, allergic reactions, sepsis and inflammatory processes, such as those which can arise under emotional and phys. stress, ischemia, reperfusion damage during and after operations, following radiation treatment and/or chemotherapy of cancer patients and in the case of inflammatory intestinal diseases, diarrhea and allergies.

IT **9000-30-0**, Guar gum  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (**nutritional** compns. which contain slightly neg. charged,  
 non-digestible polysaccharides and the use thereof for reducing  
 transport through tight junctions)

RN 9000-30-0 HCAPLUS  
 CN Guar gum (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **9000-30-0D**, Guar gum, phosphate derivs. **9004-54-0**,  
 Dextran, biological studies **9004-54-0D**, Dextran, cyano- and  
 carboxy derivs., biological studies **9040-27-1**, Arabinoxylan  
**11078-30-1**, Galactomannan **11078-31-2**, Glucomannan  
**161544-34-9**, Carboxydextran  
 RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological  
 study); USES (Uses)  
 (**nutritional** compns. which contain slightly neg. charged,  
 non-digestible polysaccharides and the use thereof for reducing  
 transport through tight junctions)

RN 9000-30-0 HCAPLUS  
 CN Guar gum (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9004-54-0 HCAPLUS  
 CN Dextran (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9004-54-0 HCAPLUS  
 CN Dextran (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9040-27-1 HCAPLUS  
 CN Arabinoxylan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11078-30-1 HCAPLUS  
 CN D-Galacto-D-mannan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11078-31-2 HCAPLUS  
 CN D-Gluco-D-mannan (9CI) (CA INDEX NAME)

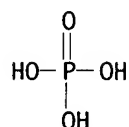
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 161544-34-9 HCAPLUS  
 CN Dextran, 6-carboxy (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

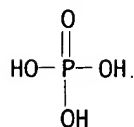
IT 7558-79-4, Disodium phosphate 7558-80-7, Monosodium phosphate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nutritional compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)

RN 7558-79-4 HCAPLUS  
 CN Phosphoric acid, disodium salt (8CI, 9CI) (CA INDEX NAME)



O2 Na

RN 7558-80-7 HCAPLUS  
 CN Phosphoric acid, monosodium salt (8CI, 9CI) (CA INDEX NAME)



O Na

IC ICM A23L001-308  
 ICS A61K031-715; A23L001-054; A23L001-0526  
 CC 17-6 (Food and Feed Chemistry)  
 Section cross-reference(s): 18, 63  
 ST intestine disorder prevention food polysaccharide; inflammation prevention intestine polysaccharide; allergy prevention intestine polysaccharide  
 IT Intestine  
 (absorption; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)  
 IT Food  
 (bars; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)  
 IT Intestine, disease  
 (enteritis; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)



- IT Intestine, disease  
(inflammatory; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Intestine, disease  
(ischemia; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Intestine, disease  
(microvillus infection; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Soybean (Glycine max)  
(milk, yogurt; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Allergy inhibitors  
Carboxyl group  
Dairy products  
Diarrhea  
Food additives  
Food allergy  
Food viscosity  
Microorganism  
Phosphate group  
Reperfusion  
Sepsis  
(**nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Polysaccharides, biological studies  
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(**nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Allergens  
RL: REM (Removal or disposal); PROC (Process)  
(**nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Beverages  
(sports; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Functional groups  
(sulfate; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Feed  
(swine; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT Milk preparations  
(yogurt; **nutritional** compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)
- IT 9000-30-0, Guar gum  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(**nutritional** compns. which contain slightly neg. charged,

non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)

- IT 9000-30-0D, Guar gum, phosphate derivs. 9004-54-0, Dextran, biological studies 9004-54-0D, Dextran, cyano- and carboxy derivs., biological studies 9040-27-1, Arabinoxylan 11078-30-1, Galactomannan 11078-31-2, Glucomannan 161544-34-9, Carboxydextran  
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(nutritional compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)

- IT 7558-79-4, Disodium phosphate 7558-80-7, Monosodium phosphate

RL: RCT (Reactant); RACT (Reactant or reagent)

(nutritional compns. which contain slightly neg. charged, non-digestible polysaccharides and the use thereof for reducing transport through tight junctions)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:590595 HCAPLUS

DOCUMENT NUMBER: 132:136792

TITLE: Fructooligosaccharides and transgalactooligosaccharides in weaner pigs' diet

AUTHOR(S): Houdijk, Jos G. M.; Hartemink, Ralf; Van Laere, Katrien M. J.; Williams, Barbara A.; Bosch, Marlou W.; Verstegen, Martin W. A.; Tamminga, Seerp

CORPORATE SOURCE: Animal Nutrition Group, Wageningen Institute of Animal Sciences (WIAS), Wageningen, 6709 PG, Neth.

SOURCE: Non-Digestible Oligosaccharides: Healthy Food for the Colon?, Proceedings of the International Symposium, Wageningen, Dec. 4-5, 1997 (1998), Meeting Date 1997, 69-78. Editor(s): Hartemink, Ralf. Wageningen Pers: Wageningen, Neth.

CODEN: 68DBAE

DOCUMENT TYPE: Conference

LANGUAGE: English

AB The effects of the dietary nondigestible oligosaccharides (NDO) such as fructooligosaccharides (FOS) and transgalactooligosaccharides (TOS) on nutrient digestibility and intestinal content microbial ecol. were studied in 20 weaner piglets with the av. initial body wt. of 10.3 kg. The diets contained 0, 10, or 40 g FOS or TOS/kg feed. The NDO were included in place of cellulose on wt. basis. The fecal and ileal apparent org. matter digestibility generally increased with higher NDO levels. The ileal apparent org. matter digestibility increased with TOS-rich diets, but not with FOS-rich diets. The FOS-fed piglets excreted less nitrogen in urine than TOS-fed piglets. While the ileal pH decreased with NDO-rich diets, the fecal pH increased. Feeding NDO at 40 g/kg feed led to higher propionate and lower acetate proportions in the ileal digesta than with 10 g NDO/kg feed. This effect was more pronounced with FOS than with TOS. Both NDO decreased the no. of ileal aerobes, but FOS yielded more ileal anaerobes than TOS. In feces, TOS yielded more anaerobes than FOS. The NDO effects on in vivo and in vitro acetate/propionate ratios were comparable with ileal chyme, but not with feces. FOS was fermented faster than TOS. Thus, in well kept animals, FOS and TOS replacing cellulose hardly affect the nutrient digestibility, but differ in their effects on intestinal microbial ecol.

- IT 64-19-7, Acetic acid, biological studies 79-09-4,

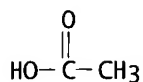
Propionic acid, biological studies 107-92-6, Butyric acid, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

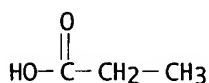
RN 64-19-7 HCAPLUS

CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



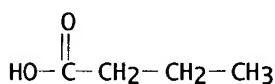
RN 79-09-4 HCAPLUS

CN Propanoic acid (9CI) (CA INDEX NAME)



RN 107-92-6 HCAPLUS

CN Butanoic acid (9CI) (CA INDEX NAME)



CC 18-4 (Animal Nutrition)

ST swine **nutrition** fructooligosaccharide

transgalactooligosaccharide digestibility intestinal bacteria

IT Dietary energy

Digestibility

Fermentation

Intestinal bacteria

**Nutrition**, animal

Swine

(dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

IT Fructooligosaccharides

Galactooligosaccharides

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)

(dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

IT Proteins, general, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)

(dietary; dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

IT Fatty acids, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(short-chain; dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

- IT 64-19-7, Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 79-31-2, Isobutyric acid 107-92-6, Butyric acid, biological studies 109-52-4, Valeric acid, biological studies 503-74-2, Isovaleric acid  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

- IT 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies 7440-70-2, Calcium, biological studies 7723-14-0, Phosphorus, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)

(dietary fructooligosaccharides and transgalactooligosaccharides effects on nutrient digestibility and intestinal bacteria in weaner piglets)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:295304 HCAPLUS

DOCUMENT NUMBER: 129:27448

TITLE: Influence of maturity of grass silage and flaked corn starch on the production and metabolism of volatile fatty acids in dairy cows

AUTHOR(S): De Visser, H.; Klop, A.; Van Der Meulen, J.; Van Vuuren, A. M.

CORPORATE SOURCE: Institute for Animal Science and Health, Lelystad, 8200 AB, Neth.

SOURCE: Journal of Dairy Science (1998), 81(4), 1028-1035  
CODEN: JDSCAE; ISSN: 0022-0302

PUBLISHER: American Dairy Science Association

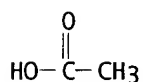
DOCUMENT TYPE: Journal

LANGUAGE: English

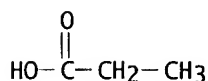
AB The effects of 2 stages of maturity of grass silage (early cut and late cut) and 3 concns. of flaked corn starch (0, 2, 4 kg) on the prodn. and molar proportions of rumen volatile fatty acids (VFA) and the net fluxes of VFA in the splanchnic tissues were studied in Holstein cows. The molar proportions of VFA in the rumen fluid were similar for cows fed both silages. When the silage diets were supplemented with starch, the proportion of propionic acid increased in cows fed the early cut silage, but no effects were found in cows fed the late cut silage. Estd. gastrointestinal prodn. of acetate, propionate, butyrate, and branched-chain fatty acids plus valerate was related to the intake of metabolizable energy and org. matter fermented into VFA. The portal release of acetate was approx. 14% lower than the estd. prodn. of acetate by cows fed the early cut silage, but cows fed the late cut silage showed a variable difference between the estd. prodn. and portal release (31, 24, and 15%, resp.) as starch supplementation increased. The portal release of butyrate plus .beta.-hydroxybutyrate and the release of branched-chain fatty acids plus valerate were approx. 70 and 25%, resp., of the estd. gastrointestinal prodn. Propionate prodn. was similar to the portal release of propionate. The net flux measurements in splanchnic tissues in combination with gastrointestinal digestion and kinetics provide

information that increases the knowledge of pathways and metab. and quantifies the availability of individual nutrients for milk prodn. in dairy cows.

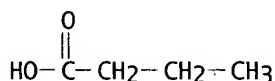
IT 64-19-7, Acetic acid, biological studies 79-09-4,  
Propionic acid, biological studies 107-92-6, Butyric acid,  
biological studies.  
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM  
(Metabolic formation); BIOL (Biological study); FORM (Formation,  
nonpreparative); PROC (Process)  
(grass silage maturity and flaked corn starch effects on rumen volatile  
fatty acids in dairy cows)  
RN 64-19-7 HCAPLUS  
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79-09-4 HCAPLUS  
CN Propanoic acid (9CI) (CA INDEX NAME)



RN 107-92-6 HCAPLUS  
CN Butanoic acid (9CI) (CA INDEX NAME)



IT 9005-25-8, Corn starch, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(grass silage maturity and flaked corn starch effects on rumen volatile  
fatty acids in dairy cows)  
RN 9005-25-8 HCAPLUS  
CN Starch (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 18-4 (Animal Nutrition)

ST cattle **nutrition** silage starch rumen fermn; volatile fatty acid  
cattle silage starch

IT Blood

Dairy cattle

Dietary energy

Feeding experiment

Fermentation

**Nutrition**, animal

Stomach content, ruminant

(grass silage maturity and flaked corn starch effects on rumen volatile  
fatty acids in dairy cows)

IT Silage

Silage

- (grass; grass silage maturity and flaked corn starch effects on rumen volatile fatty acids in dairy cows)
- IT Fatty acids, biological studies  
Fatty acids, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)  
(short-chain; grass silage maturity and flaked corn starch effects on rumen volatile fatty acids in dairy cows)
- IT Grass (Poaceae)  
Grass (Poaceae)  
(silage; grass silage maturity and flaked corn starch effects on rumen volatile fatty acids in dairy cows)
- IT 64-19-7, Acetic acid, biological studies 79-09-4,  
Propionic acid, biological studies 107-92-6, Butyric acid,  
biological studies 300-85-6, .beta. Hydroxybutyric acid  
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)  
(grass silage maturity and flaked corn starch effects on rumen volatile fatty acids in dairy cows)
- IT 9005-25-8, Corn starch, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(grass silage maturity and flaked corn starch effects on rumen volatile fatty acids in dairy cows)
- REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:653090 HCAPLUS

DOCUMENT NUMBER: 127:292480

TITLE: Effect of starch on the bioavailability of glutamine and leucine in the dairy cow

AUTHOR(S): Meijer, G. A. L.; Bontempo, V.; Van Vuuren, A. M.;  
Van Der Meulen, J.

CORPORATE SOURCE: Department of Ruminant Nutrition, Institute for Animal Science and Health, Lelystad, 8200 AB, Neth.

SOURCE: Journal of Dairy Science (1997), 80(9), 2143-2148

CODEN: JDSCAE; ISSN: 0022-0302

PUBLISHER: American Dairy Science Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This expt. was designed to quantify changes in the utilization of Gln and Leu by the gut wall as a result of changes in the starch supply to the duodenum. Four dairy cows fitted with cannulas in the rumen and the distal duodenum were adapted for 3 wk to starch infusions, either into the rumen (600 g flaked corn/d) or into the duodenum (300 g flaked corn plus 300 g corn meal/d), in a 2 .times. 2 crossover design. Absorption and elimination kinetics and the relative bioavailability of Gln and Leu were measured during wk 4 and 5. After infusion of 50 g Gln or 10 g Leu into the duodenum or jugular vein, blood samples were taken from the jugular vein at 0.5-h intervals up to 4 h after the infusion. The concns. of Gln and Leu in blood plasma fitted best to an open one-compartment model (duodenal infusion) or to an open two-compartment model (i.v. infusion). Both amino acids were rapidly absorbed; their half-life times were <20 min. The amt. of Gln trapped in the splanchnic bed was higher than the amt. of Leu. The site of starch infusion did not affect the relative bioavailability of amino acids.

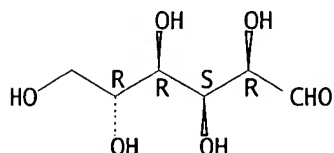
- IT 50-99-7, D-Glucose, biological studies  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)  
(blood; dietary starch effect on bioavailability of glutamine and  
leucine and milk prodn. in dairy cows)

RN 50-99-7 HCAPLUS

CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(dietary starch effect on bioavailability of glutamine and leucine and  
milk prodn. in dairy cows)

IT 9005-25-8, Starch, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); FFD  
(Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)  
(dietary starch effect on bioavailability of glutamine and leucine and  
milk prodn. in dairy cows)

RN 9005-25-8 HCAPLUS

CN Starch (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 18-4 (Animal Nutrition)

ST cattle diet starch glutamine leucine bioavailability

IT Blood plasma

Dairy cattle

Digestibility

**Nutrition, animal**

(dietary starch effect on bioavailability of glutamine and leucine and  
milk prodn. in dairy cows)

IT Amino acids, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(dietary starch effect on bioavailability of glutamine and leucine and  
milk prodn. in dairy cows)

IT Fats and Glyceridic oils, biological studies

Proteins, general, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM  
(Metabolic formation); BIOL (Biological study); FORM (Formation,  
nonpreparative); PROC (Process)

(milk; dietary starch effect on bioavailability of glutamine and  
leucine and milk prodn. in dairy cows)

IT 50-99-7, D-Glucose, biological studies

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(blood; dietary starch effect on bioavailability of glutamine and  
leucine and milk prodn. in dairy cows)

IT 50-99-7, D-Glucose, biological studies 57-13-6, Urea, biological  
studies 61-90-5, L-Leucine, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(dietary starch effect on bioavailability of glutamine and leucine and  
milk prodn. in dairy cows)

IT 56-85-9, L-Glutamine, biological studies 9005-25-8, Starch, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (dietary starch effect on bioavailability of glutamine and leucine and milk prodn. in dairy cows)

IT 63-42-3, Lactose  
 RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)  
 (dietary starch effect on bioavailability of glutamine and leucine and milk prodn. in dairy cows)

L10 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:644451 HCAPLUS

DOCUMENT NUMBER: 127:292479

TITLE: Effect of resistant starch on net portal-drained viscera flux of glucose, volatile fatty acids, urea, and ammonia in growing pigs

AUTHOR(S): Van Der Meulen, J.; Bakker, G. C. M.; Bakker, J. G. M.; De Visser, H.; Jongbloed, A. W.; Everts, H.

CORPORATE SOURCE: Department of Nutrition of Pigs and Poultry, Institute for Animal Science and Health (ID-DLO), Lelystad, 8200 AB, Neth.

SOURCE: Journal of Animal Science (1997), 75(10), 2697-2704  
 CODEN: JANSAG; ISSN: 0021-8812

PUBLISHER: American Society of Animal Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The net portal-drained viscera (PDV) flux of glucose, volatile fatty acids (VFA), ammonia, and urea was detd. in pigs fed diets with or without digestion-resistant starch (raw potato starch). Diets consisted of 65% corn starch (diet CS), 32.5% corn starch and 32.5% raw potato starch (diet CPS), or 65% raw potato starch (diet PS); the remaining 35% supplied all amino acids, fat, fiber, minerals, and vitamins. The diets contained twice the maintenance requirement for energy and were fed twice daily to 4 barrows (initial body wt. 56 kg) in 3 periods in a crossover design. The pigs were fitted with catheters in a mesenteric vein, a mesenteric artery, and the portal vein, and the net PDV flux was calcd. by multiplying portal-arterial concn. differences and corresponding portal vein flows. The net PDV flux of glucose was significantly less after feeding diets CPS and PS, and portal absorption of ileally digested glucose was 89, 66, and 41% for the diets CS, CPS, and PS, resp. The net PDV flux of VFA was lowest after feeding diet CS and 3-4 times higher after feeding diets CPS and PS. The net PDV flux of ammonia was highest for diet CS and almost halved after feeding diets CPS and PS. There was a small neg. net PDV flux of urea for diets CS and CPS, which significantly increased after feeding diet PS. Thus, the excretion of nitrogen is shifted from urine to feces primarily by redn. of the net PDV flux of ammonia when resistant starch is fed.

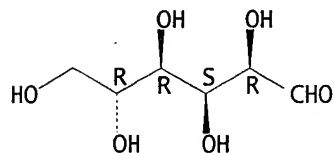
IT 50-99-7, Glucose, biological studies 64-19-7, Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 107-92-6, Butyric acid, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (digestion-resistant starch effect on portal-drained viscera flux of glucose, volatile fatty acids, urea, and ammonia in growing pigs)

RN 50-99-7 HCAPLUS

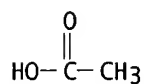
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)



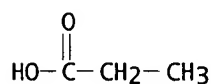
Absolute stereochemistry.



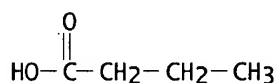
RN 64-19-7 HCAPLUS  
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 79-09-4 HCAPLUS  
CN Propanoic acid (9CI) (CA INDEX NAME)



RN 107-92-6 HCAPLUS  
CN Butanoic acid (9CI) (CA INDEX NAME)



IT 9005-25-8, Potato starch, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(potato; digestion-resistant starch effect on portal-drained viscera  
flux of glucose, volatile fatty acids, urea, and ammonia in growing  
pigs)

RN 9005-25-8 HCAPLUS  
CN Starch (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CC 18-4 (Animal Nutrition)

ST swine diet resistant starch nutrient absorption; volatile fatty acid diet  
resistant starch; ammonia intestine absorption diet resistant starch; urea  
intestine flux diet resistant starch

IT Diet

Digestibility

Digestive tract

Feeding experiment

Nutrition, animal

Swine

(digestion-resistant starch effect on portal-drained viscera flux of  
glucose, volatile fatty acids, urea, and ammonia in growing pigs)

IT Blood plasma

(portal; digestion-resistant starch effect on portal-drained viscera flux of glucose, volatile fatty acids, urea, and ammonia in growing pigs)

- IT Fatty acids, biological studies  
Fatty acids, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(short-chain; digestion-resistant starch effect on portal-drained viscera flux of glucose, volatile fatty acids, urea, and ammonia in growing pigs)
- IT 50-99-7, Glucose, biological studies 57-13-6, Urea, biological studies 64-19-7, Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 107-92-6, Butyric acid, biological studies 7664-41-7, Ammonia, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(digestion-resistant starch effect on portal-drained viscera flux of glucose, volatile fatty acids, urea, and ammonia in growing pigs)
- IT 9005-25-8, Potato starch, biological studies  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(potato; digestion-resistant starch effect on portal-drained viscera flux of glucose, volatile fatty acids, urea, and ammonia in growing pigs)